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FRANCE FACES DEPOPULATION: POSTLUDE EDITION, 1936–1976

STUDIES IN SOCIAL AND ECONOMIC DEMOGRAPHY

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1. Joseph J. Spengler, *Facing Zero Population Growth*
2. Joseph J. Spengler, *France Faces Depopulation: Postlude Edition, 1936–1976*

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FRANCE FACES DEPOPULATION:

POSTLUDE EDITION, 1936–1976

JOSEPH J. SPENGLER

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To
Harry *and* Ollie Kress
Ever sources of inspiration

FOREWORD

"Some books," the expression goes, "are waiting to be written; other books have already been written, but await the reading." Spengler's *France Faces Depopulation* is an apt example of the latter. Upon its first publication in 1938, just prior to the outbreak of the Second World War, the book received only modest coverage in academic circles in this country and a few accolades from French scholars, but scarcely the attention that would have accompanied its publication several years earlier. Far from a stillbirth, however, the book has continued to receive scholarly attention, even though it has been of difficult access for some time. Its reissue at this time seems particularly appropriate in light of the renewed attention being given to zero and to, a somewhat lesser extent, negative population growth, the prospects of a stationary population and the implications of such demographic developments within many industrialized nations.

As Spengler notes in the new Postlude chapter to this volume, which places the events of the last forty years of French demographic history in perspective, the conditions and concerns of the present bear remarkable resemblance to those of the past. It is important to note that the past to which he refers transcends the 1930's as well, with concern for depopulation in France found as an issue as early as the eighteenth century, although subsequent facts proved these fears to be unfounded. But by the middle of the nineteenth century, and especially following France's defeat in the Franco-Prussian War (1870–71), the alarms were sounded in concert with evidence that France's population growth was indeed slow, largely brought about by declining fertility. By the last decade of the nineteenth century it had become an active intellectual and political issue.

The publication of numerous books and journal articles in France, the formation of the Alliance Nationale pour L'Accroissement de la Population Française in 1896 and the convening in 1902 of an Extraparliamentary Commission of Depopulation attest to the widespread attention. The emotional nature of this issue is clearly evident in Cauderlier's *Les Causes de la Dépopulation de la France.*[1]

> Research on the causes of depopulation in France is a problem that interests not only the person desiring to be instructed, not only all Frenchmen who love their country, but also all men who understand how necessary it is for human progress that France retains among nations the position to which she has a right, by reason of the eminent services that she has rendered to science and civilization. (p. 5)

The Introduction to an issue of *La Revue Hebdomadaire*[2] in 1909 also captures this feeling dramatically.

> The question that we are treating here is thankless and sad. Only our enemies can find reasons for satisfaction. But, just as it is for France of the future a question of life or death, *The Weekly Review* can't be disinterested and we believe that this work will be useful if it places before the eyes of its reader and groups to follow . . . the fears of many people that the growing sterility of French blood has worried us for a long time.

In any age in which the number of people in a population was viewed as synonymous with power, especially in providing the basis of military strength, these *fin de siécle* xenophobic fears seem justifiable. But the issue ran deeper even then —concern with the seemingly physiological infecundity of the reproductive population; the libertine pursuit of sex for pleasure rather than for reproduction; the widespread use of abortions; the growing alcoholism and its effect on health; the increasing threat to the survival of the traditional family; the moral degeneracy of the society; and the greater decline in fertility among the upper and middle classes than among those lower in the social structure. Pervading many of these fears ran an underlying theme of the decline of Western society (perhaps emulating Roman society), ironically finding its spokesman in the German, Oswald Spengler, and his grim vision of the future.

The First World War and the later rise of National Socialism in Germany did little to alleviate these fears in France, nor did the persistent decline of fertility in the 1930's. In this period other factors also become manifest. First, that depopulation, or at least cessation of population growth, had become true not only for France, but for much of Western Europe as well. Second, that the inevitable result of population change at or below replacement would lead to an aging population, with an accompanying stagnation in the size and vitality of the labor force and the burden of providing for the social welfare of the elderly. Third, that governmental action was called for to stem this tide of events and regenerate population growth.

This was the context that faced Spengler as he came to write his book. It was clear that France represented a prime case of a nation that had been facing depopulation for some time. So too, there had been long public and scholarly concern over the issue in France. France was noted for its scholars —Bertillon, Gonnard, Leroy-Beaulieu—who had addressed the question directly and for its relatively good demographic statistics, which had provided empirical evidence on the problem. Thus, there was a certain presumption on Spengler's part in writing about conditions in a country that was not his own and which, unlike the reverse case of de Tocqueville, he had never visited. Yet Spengler attempted, and for the most part achieved, a fresh view of the situation, shorn of the level of emotional intensity that often characterized French scholars, even the more scientific ones. The book was comprehensive in its multidisciplinary sweep and integrative in tying theory with fact. That the book remains still fresh is due to Spengler's effort to use the French situation to examine the more general case of how population movements are both determinants and consequences of broader societal changes.

The vision of the future described by Spengler was not all perfect by any means. The very first sentence of the Introduction and Summary contains, in hindsight, the dubious judgment that "Within the next quarter century true depopulation . . . will manifest itself in nearly all of the countries of Europe and in those non-European countries to which Western civilization has spread." The second world war that soon ravaged Western Europe, the revival of fertility in the post-war period, and the accompanying economic revival not only in France, but throughout Western Europe, was clearly not foreseen. Moreover, his opinion on the ineffectiveness of measures to stem the decline in fertility might be questioned by some.

But perhaps we are only faulting his perspective timing of events. Spengler, indeed, views depopulation as a "naturally evolving" event, although not *stricto senso* a permanent condition, and invariably a subject that generates extensive public concern. Although prevailing public opinion in many Western societies appears to favor zero population growth (i.e., stationarity), the possibilities of national *depopulation* have not until very recently received much attention. Implied in the views of most experts is the belief that policies can be implemented that will "fine-tune" the system to maintain natural growth at replacement level, even with a voluntaristic approach. Yet, certain conditions that prevail today—effective and widely available contraceptives, legalized abortions, increasing family instability—may have become so institutionalized as to make many governmental actions aimed at accelerating growth increasingly ineffective. Although limited examples of negative policies, such as Romania's sudden program to halt abortions in the mid-1960's, appear to have produced the desired results, it is clear that positive steps are the only feasible way of approaching the issue in most non-totalitarian states. Moreover, our increased knowledge about population dynamics now makes it evident that such policies, whether concerned with promoting or depressing fertility or the control of immigration, must be sufficiently flexible to adjust to the perturbations in population composition that have been created by earlier shifts in population change (e.g., "baby booms," wars, etc.).

The clarion has been recently sounded in the United States by Westoff,[3] the former Executive Director (1970–

72) of the Commission on Population Growth and the American Future:

> Although it seems ironic, if not ludicrous—in view of our concerns about growth of only a few years ago—to be thinking about the possible need in the future to *maintain* replacement fertility, there are reasons to believe that some subsidization of reproduction may eventually become necessary. (p. 83)

Along with works by D. V. Glass[4] and W. B. Reddaway,[5] this volume provides not only a reminder that the issue is historically imprinted, but that the broad dimensions of the problem of population replacement—national security, economic prosperity, optimal utilization of resources, population maldistribution, social instability—have been of such widespread concern in the past as to arouse efforts to enact legislative change. A classic French statement is appropriate to describe this recurring situation: "plus ça change, plus c'est la même chose."

GEORGE C. MYERS

1978

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[1] Cauderlier, G. *Les Causes de la Dépopulation de la France* Paris: Librairie Guillaumin, 1901.

[2] *La Revue Hebdomadaire.* "Le Depeuplement de la France" Paris: Typographie Plan-Nourrit, 1909.

[3] Westoff, Charles F. "Some Speculations on the Future of Marriage and Fertility" *Family Planning Perspectives*, 10 (March/April, 1978), pp. 79–83.

[4] Glass, D. V. *Population Policies and Movements in Europe*, London: Oxford University Press, 1940.

[5] Reddaway, W. B. *The Economics of a Declining Population*, London: G. Allen and Unwin, Ltd., 1939.

PREFACE

For many decades the so-called problem of depopulation has aroused the concern of French scholars, laymen, and legislators, and has led to the publication of many works in which are described both theories of the causes of France's relatively slow demographic growth and measures designed to accelerate this rate of growth and to counterbalance some of the allegedly untoward effects of a comparatively low rate of demographic growth. In recent decades many such counterbalancing measures have been put into effect in France.

This work is the first extensive study of the French depopulation problem and of the effects of anticipations of depopulation upon French policies, that has appeared in a language other than French; it is essentially a review of the problem of depopulation as it has appeared to French scholars, writers, and statesmen, and of the measures proposed and/or enacted to cope with it. While the present study is not primarily a history of population growth in France, nor a complete explanation of the causes of the decline in French fertility, it embodies virtually all of the available data on population growth in France and theoretical analyses of the causes of the decline in fertility, of the comparative efficacy of measures designed to check the decline in natality, and of the nature of the relationship between numbers and individual welfare.

Four chapters are devoted to the history of French population growth and of the changes in the geographical and occupational composition of the French population, and to the description of trends in overall and differential fertility in France. Two chapters are devoted to a historical account of the growth of alarm at depopulation in France, and one to a description of French and other theories advanced to account for the decline in French natural increase. Three chapters are devoted to a description of French theories and measures with respect to colonial, immigration, birth-stimulating, and other policies designed to counterbalance the effects of low natality. Chapter XI constitutes an interpretation and appraisal of French theories and policies. Each subject of discussion has been treated in light of its historical background. Although the findings are generally too detailed to permit a terse summary, a bird's-eye view of certain of the findings is presented in the Introduction.

The writer is indebted to Professor A. B. Wolfe, who first interested him in French demography and made available to him his extensive library; to Dean W. H. Glasson for continued interest and stimulation; to Dr. R. R. Kuczynski for past aid, information, and stimulation; to Dr. D. V. Glass for pertinent information and interest; to Dr. R. O. Rivera for his kindness and assistance; to Miss Mary C. Horton of the Army Medical Library for many courtesies; and to the Research Council and the Library of Duke University for financial and other assistance. The writer is especially indebted to Dr. W. M. Gibson and Mrs. Edna Keech for a critical reading of the final copy and for various suggestions.

JOSEPH J. SPENGLER

1938

POSTLUDE, 1936–76

The significance of what takes place within a country is conditioned not only by what takes place there, but also by what takes place outside and affects its relative position and hence the degree of autonomy that it enjoys within the network of nations. In this updating of *France Faces Depopulation*, originally published in 1938, I continue to look at France mainly through the eyes of *her* demographers and social scientists; original analyses are not attempted. The implications of major changes in the world at large for France and her comparative demographic and politico-economic situation will be presented. Then France's internal demographic development since the middle 1930's, as well as French interaction between demographic and politico-economic change, together with French interpretation of this demographic change, will be reviewed. Conflict originating in population trends and symbolized in the above epigraph is evident in the post-1930 history of France to which her past has been prologue.

I have not thought it desirable to index the postlude chapter, the content of which has been outlined above. The chapter has adequate subheads to provide ready access to its content. Moreover, leaving the Index (and the Bibliographical Note) to the original edition intact seems to have certain advantages for those readers who might want to examine the two periods involved on a comparative basis.

I am deeply indebted to Professor George C. Myers for many suggestions for substantive and expositive improvement and to the Ford and Rockefeller foundations for the joint grant that made this postlude possible.

JOSEPH J. SPENGLER

1978

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FRANCE FACES DEPOPULATION

INTRODUCTION AND SUMMARY

Within the next quarter century true depopulation—a persistent long-run excess of deaths over births—will manifest itself in nearly all the countries of Europe and in those non-European countries to which Western civilization has spread. The present stream of concern over eventual depopulation—a concern evident in the many European works dealing with depopulation, in the depopulationist inquiries being made in countries such as England and Sweden, and in the anti-depopulation measures already put into effect in certain countries—will assume the proportions of a deluge. The growth of alarm at depopulation in various countries will proceed along the lines of a rather definite and somewhat "naturally evolving" pattern and will be accompanied by the enactment of a sequence of ineffectual measures designed to stem the decline in fertility. Although the present study is concerned solely with France, the materials here presented constitute an informed, even though somewhat adumbrated, picture of what may be anticipated in countries other than France.[1]

The materials presented in Chapter I indicate that while France experienced depopulation in the past, the resulting gaps were more than repaired in succeeding periods. For prior to the late nineteenth and present centuries excesses of deaths over births were attributable primarily to the increased operation of the positive checks, to increases in mortality occasioned by war, famine, pestilence, and so on. Voluntary control of numbers through recourse to contraceptives, abortifacients, and birth-preventing practices, while by no means unknown prior to 1800, was not resorted to on a sufficient scale to produce a deficit of births; such control did not become a sufficient cause of incipient depopulation until the latter part of the nineteenth century. Within the territory of present-day and pre-war France population apparently grew during the medieval period despite occasional interruptions, numbering perhaps 40 persons per square kilometer early in the fourteenth century. The ensuing four centuries witnessed periodic increases and decreases in density but no pronounced secular increase in number and density. Secular growth seems to have begun again in the second quarter of the eighteenth century, the population attaining densities of about 52, 67, 73, and 76 persons per square kilometer in 1801, 1851, 1901, and 1931.

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[1] Certain journals are designated by initials only; certain works, by the names of authors only. For the key to these abbreviations see Bibliographical Note. For the sake of convenience, the editorial "we" is deliberately employed.

The past century has witnessed a marked change in the relative demographic importance of France. With an actual population more extensive than that of any other European land, France attained the demographic hegemony of Europe as early as 1325. This hegemony she retained, although in a diminishing degree, until near the close of the eighteenth century when her population apparently was outstripped by that of Russia. During the nineteenth century the population of France grew, particularly prior to 1850, but it grew less rapidly than the populations of other European lands, especially after 1850. As a result of this slow relative growth, traceable primarily to her low level of natality and natural increase, the population of France was outstripped in the course of the nineteenth century by the populations of Germany, Austria-Hungary, and the United Kingdom, and after 1930 by that of Italy.

During the nineteenth and present centuries the geographical distribution and the occupational composition of the French population have undergone marked changes, as we indicate in Chapter II. Since 1831 an increasing number of French departments have experienced depopulation in virtue of either a deficit of births, or net emigration, or both. In 1931 but 65 of the 90 French departments had a greater population than in 1801; but 45 had a greater population than in 1831; but 16 (other than the Rhenish departments) had a greater population than at any previous time. Five-sixths of French population growth since 1801 has been concentrated in one-fifth of the departments, nearly all of which are essentially nonagricultural and industrial and commercial in character. Despite the fact that urbanization has proceeded less rapidly in France than in most European lands since about the middle of the nineteenth century, the rural population of France has declined nearly one-fourth in the past ninety years. During the past seventy years the proportion of the employed population engaged in agriculture has declined nearly one-fifth; that engaged in industry, transportation, and public services has increased about one-fifth; that in commerce has nearly doubled; that in the liberal professions has increased one-third. Wherefore it is evident that the relative geographical redistribution of the French population, predominantly the product of continuous internal migration, reflects the double impact of changes in tastes and technology upon a once essentially agricultural people.

The materials presented in Chapter III indicate that natality, fertility, and natural increase declined much more rapidly in France throughout the nineteenth century than did similar indices in other countries; that this decline is primarily the result of the decline in the fertility of the married; that low natality and not high mortality was and is primarily responsible for the steady diminution in the rate of population growth in France. In the latter part of the eighteenth century French natality apparently compared favorably with that in other European lands; in the early part of the nineteenth century it fell below the West European level, remaining below at the outbreak of the World War. In 1913 French natality was perhaps 50 per cent below the late eighteenth-century level, and about 43 per cent below the 1800-05 level; in 1936 French natality was 20 per cent below the 1911-13 level. Marital fertility was only half as great in 1913 as in 1806. The absolute number of births in 1926 was only about 85 per cent as great as in 1801, and but 75 per cent as great as in 1859. The excess of births over deaths was only 39 per cent as great in 1931-35 as in 1801-05. The French population was no longer replacing itself at the close of the nineteenth century, deaths actually exceeding births in eleven of the sixty-four years 1850-1913, and in nine of the years 1914-36.

The post-war period witnessed a temporary retardation of the rate of decline in French natality and fertility, natality in several European countries actually falling below the French level. Fertility in France generally remained below the replacement level, however, less than one-half of the departments experiencing a number of births sufficient in the long run to counterbalance mortality. After 1930 the rate of decline again began to accelerate and net reproduction fell at least one-fifth below the replacement level. Deaths bid to exceed births in an increasing degree each year. By 1960 France, which in 1800 and 1925 contained about 14.6 and 8.6 per cent respectively of the population of Europe, will include but 6.5 per cent of the population of the Continent. What the situation will be fifty years hence depends primarily upon the rate at which depopulation proceeds in the other countries of Europe, for the French population will then number 30-34 millions in contrast to 42 millions at present.

Natality and fertility in France have varied by region, social class, and occupation for at least two centuries. Both the testimony of contemporaries who were aware that family size was being restricted in certain regions and classes and the estimates of statisticians suggest the prevalence of such fertility differentials in pre-1800 France. Statistical data for post-1800 France demonstrate the existence of such differentials. In general, these fertility differentials have resembled in nature the differentials recorded in other West European countries. In the course of the past century, however, the character of French fertility differentials has changed somewhat. During the past thirty to forty years the relative spread between fertility in the more fertile classes and regions and that in the less fertile classes and regions apparently has diminished somewhat. Wealth and income now appear to be positively correlated with fertility, whereas formerly they were negatively correlated. Ruralism appears to be relatively more favorable to fertility than formerly, the rural population having been virtually the sole source of natural increase in France during the past half century. The inverse relationship between marital fertility and the proportion of persons married is less pronounced at present than formerly. Although the fertility pattern of France seems to have tended to become more homogeneous in proportion as the cultural pattern has become more homogeneous, the striking lack of data on differential fertility in France makes precise generalization with respect to differentials and trends in differentials impossible.

French explanations of the decline in fertility have not differed markedly. It has generally been assumed that onanism, abortion, and contraception constitute the immediate checks to fertility, recourse to these practices having spread as silently and subtly as the ultimate check to fertility, namely, the desire to limit family size. Many French writers have been content to attribute the spread of the desire to limit family size to the decline in religious beliefs, to the urbanization of the population, to the influence of enforced universal military service, to the growth of thrift, to the multiplication of desires, to education, to woman's entry into industry, to the fact that the net money cost of rearing children has risen more rapidly than family money income, to the allegedly unstabilizing influence exercised by the French inheritance law upon French familial life. Other French writers have sought in the culture-pattern of France some element or complex of elements inherently conducive to family limitation. Thus Le Play and his followers have stressed the destabilizing influence exercised upon French familial life by the French laws with respect to inheritance. Dumont and his followers have attributed the spread of the desire to limit family size to the "social capillarity" to which capitalism and political democracy allegedly have given birth. Men, it is said, are unequally provided with wealth and opportunity, but equally provided with the theoretical right and ambition to rise in social and economic rank. Accordingly, since children handicap man in his efforts to ascend, each has few children. Whence it follows that were wealth and opportunity equalized and tastes simplified, fertility would increase. Leroy-Beaulieu and his followers have traced the decline in fertility to the rise of "civilization" which is defined to include "the development of cities and . . . of the middle class, the quasi-universal propagation of comfort, of instruction, the extension of leisure, the soaring of individual and family ambitions, the prospect open to all of elevating themselves in the social scale," feminism, ambition for children, fear of descending in social rank, and a neo-pagan egoism and pursuit of pleasure. Analysis of these seemingly different explanations, however, reveals, as we show in Chapter VII, more similarities than dissimilarities.

The failure of France's population to grow appreciably has given rise several times to widespread alarm lest slow growth cost France her hegemony on the Continent. Such alarm was expressed in the middle third of the eighteenth century, only to be dissipated some years later by the discovery that France's population was growing and by the acceptance of the belief that numbers will grow so long as subsistence is available. The latter belief held sway until at least the middle of the nineteenth century. In the 1850's, however, growing awareness of France's relatively slow growth, coupled with the development of a temporary excess of deaths over births, led to numerous expressions of concern over the demographic future of France. This concern increased when the events of 1866 presaged the consolidation of a theretofore disunited Germany; it assumed great proportions when five years later Prussia defeated France. Books and articles on depopulation and on means of coping with it multiplied, rivaling in extent the celebrated *Les Cahiers* of 1789. "*Liberté, egalité, fraternité*" became "*liberté, egalité, maternité.*" Legislators began to consider proposals to stimulate population growth. Toward the end of the century pro-populationist groups began to be organized for the purpose of securing the passage of appropriate legislation, the first and most powerful organization for this purpose, The National Alliance for the Increase of the French Population, being formed in 1896. By 1922 at least seventy-eight organizations were sponsoring pro-natality measures. Since 1919 annual pro-natality congresses have been held. The French government as such took no effective part in the pro-populationist movement until the war and post-war periods, the pre-war commissions of inquiry into the causes and consequences of the decline in fertility producing few tangible results. After the World War, however, pro-populationist propaganda became effectively organized, the French state adopted numerous measures to check depopulation, and French domestic and foreign policies were adapted in increasing degree to the domestic demographic situation.

The authors of alarmist works on the French population problem and the proponents of pro-populationist measures have seen and continue to see in the slow rate of population growth in France and in the threat of depopulation the source of many untoward consequences for the French people. During the half century preceding the World War it was asserted that France's slow growth would diminish her militaristic, political, economic, and cultural prestige; retard her commercial and economic growth; render difficult if not impossible the development of her colonies; and expose her to military attack and to the culturally disintegrating influences of heavy and irresistible foreign immigration. These propositions have been repeated in substance in the post-war years by many writers who assert also that France's slow growth encouraged the German attack in 1914 and that a diminution in numbers will augment the relative amount of unemployment. With few exceptions the pro-populationist writers have reasoned in terms of the French people as a collectivity and not in terms of individual welfare.

French theory and policy with respect to immigration and colonies have been appreciably influenced by the domestic demographic situation of France. France has long been the European country whence relatively the smallest number of emigrants flows and into which relatively the largest number of immigrants moves, net immigration having supplied the bulk of French population growth for some decades. Immigration, essentially spontaneous and free of much regulation in the pre-war period, has been subjected to an increasing amount of control in the post-war era. The objective of this control has been the promotion of population growth and the stimulation of economic and cultural assimilation of foreigners, and not primarily the curtailment of immigration. French colonial ventures in the latter half of the nineteenth century were defended not on the ground that colonies provided relief for population pressure but on the grounds that the possession of colonies might stimulate French natality, enable France to assimilate foreign peoples, and provide for France in non-European areas sources of economic and political strength not obtainable in the slowly growing mother country. Immigration, it was said, would counterbalance the efflux of such numbers of French citizens as were necessary to establish control over colonial areas. Colonies, it was urged before the World War, would provide France with the human and nonhuman sinews of war, this principle having since become a cardinal point in French foreign policy.

More significant in the long run than the immigration and colonial policies effected by France as a consequence of her domestic and demographic situation is the increasing use of pecuniary stimuli to reproduction and child maintenance. Family size has come to be one determinant of individual wage levels in both public and private fields of employment, in part because of increasing governmental pressure upon private employers to introduce the family wage system. Birth bonuses, child and maternity allowances, and other pecuniary aids to parents are being resorted to in an increasing degree by the national and the local governments of France. Pecuniary and other means have been employed for some years now to reduce child and infant mortality.

Of the measures introduced in France to stimulate natural increase only those designed to reduce child and infant mortality have been successful. The birth-stimulating measures have prevented fertility from falling as rapidly as it otherwise would have fallen; but they have not permanently decelerated the rate of decline in fertility, this rate having increased following a temporary retardation in the immediate post-war years. The birth-stimulating measures not only have provided parents with but a small fraction of the cost of replacing the family; they have failed to modify those conditions in the French cultural complex which are especially conducive to infertility.

French birth-stimulating measures have failed, as we show in Chapter XI, because they are founded upon inadequate conceptions of the cause of the decline in fertility. The family conceived as an arrangement to secure the replacement of the population cannot, in the absence of significant reforms, coexist with the innumerable cultural elements precipitated into the pattern of French culture by the technological changes of the past century. Man is no longer sufficiently motivated to reproduce his kind. Wherefore, since there is no reason to suppose that ancient fertility-favoring cultural media can be restored, new sources of motivation must be created. Were one-third of the annual income of France employed to remunerate families engaged in producing and rearing children, it is likely that the French population would replace itself. Inasmuch as this sum is many times the present sum devoted by the state to the remuneration of parents, it is possible that the devotion of ever larger sums to the stimulation of procreation will be accompanied by a gradual transfer of the child-reproducing and rearing functions from the comparatively inefficient familial institution to specialists in reproduction and child maintenance who are able to perform this function at a lower per unit cost than the present-day familial system. Whatever be the specific ultimate outcome of state efforts to stimulate procreation, it is unlikely that the French population will replace itself unless one-fourth to one-third of the annual income of France is devoted to the pecuniary stimulation of the reproduction and maintenance of the race.

Should the French state determine to provide sufficient pecuniary stimulation, the means out of which such provision can be made will have to be raised primarily through the appropriation by the state of all or nearly all excess income received by the higher income classes. Taxation of the lower income classes will not suffice. Whence it is evident that the securing of "sufficient" population growth will involve a revolutionary alteration of the present-day pattern of income distribution, a marked increase in the role of the state, and a significant re-allocation of politico-economic power.

The view of many French writers that an increase in numbers will contribute to the welfare of the individual and masses is dismissed as invalid in Chapter XI. In a sense this view appears to be largely an epiphenomenon of present-day interclass relationships in France. There is no evidence whatever to support the view that an increase in numbers will increase per capita real income in France, given either the present-day relation between physical income and physio-psychical welfare, or a cultural situation wherein the correlation between physical income and physio-psychical welfare is at a maximum. Nor is there evidence that a decrease in numbers will have a depressive effect upon individual welfare. On the contrary, factual data and theoretical analysis suggest that an appreciable decline in numbers (say, as much as 25 per cent) may make possible an elevation of per capita real income and will certainly make possible an extension of the period during which a given level of per capita real income may be enjoyed in France (for in the absence of a chemical revolution, the capacity of France to support population even at the present level of income will decline, possibly within the present century). Whence it follows that further population growth will prove prejudicial to the welfare of the French masses, however much it may benefit certain circumscribed groups whose members seek to identify their own welfare with that of the collectivity.

CHAPTER I

GROWTH IN TOTAL POPULATION
1700-1936

DESPITE THE fact that more scholarship "has been expended on the history of population in France than in any other European country," any estimate of the population of France before 1700 is, as A. B. Wolfe states, "problematical."[1] The estimates made by, or based upon the studies of, eighteenth-century writers are marked by varying but considerable probabilities of error. Even the population totals based upon the earlier French censuses (1801, 1826, 1831) fall short of accuracy, for no comparatively complete and accurate enumerations and compilations were made until 1836.[2] These statistical shortcomings necessarily influence some of the results given below.

But three sets of documents contain information relative to the population of France prior to 1700: (a) the polyptique of the Abbé Irminon, a report on the affairs of a number of domains in the region of Paris in the early ninth century; (b) a report on the "*Paroisses et feux des bailliages et sénéchaussées de France*" (1328); and (c) Froumentau's *Secret des finances de France* (1581), an estimate of the number of parishes and households or families in France in 1581. None of these documents gives an actual and complete count of the population in the areas described, but only an enumeration of the population in certain domains, or an enumeration of what are usually households *(feux)*. Each of these documents describes only a fraction of present-day or pre-war France: that of the early ninth century, under one per cent; those of 1328 and 1581, respectively, about two-fifths and two-thirds of pre-war France. Accordingly, as Sée has pointed out, certain assumptions underlie population estimates based upon these documents, namely: (a) the meaning of the term *feu* and the population figure it represents; (b) the degree of similarity between the demographic characteristics of areas described in the documents and the corresponding characteristics of the parts of France for which no documents exist. Estimates of the pre-1700 population of France vary according to the assumptions made and therefore are largely conjectural.[3]

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[1] A. B. Wolfe, *Journal of the American Statistical Association*, XXVII (1932), 362.

[2] Writers in the sixteenth, seventeenth, and eighteenth centuries (e.g., Bodin, Montchrétien, Vauban, Melon, Messance, *et al.*) advocated either the collection of demographic and other statistical materials, or periodic censuses. Censuses were not taken, however, because many believed them to imply impiety or to be both impractical and conducive to social unrest. During the Revolution laws were passed prescribing annual enumerations of the population but were not carried out as intended. The first national enumeration, that of 1801, was defective because returns for some prefectures were estimates. Returns for 1806 to 1821 were obtained chiefly by adding the observed excess of births over deaths to the returns for 1801. The returns for 1826 and 1831 include estimates. The returns for 1836 were made by family or household; for 1876 and later censuses, by individual. Not until 1881 was the enumeration made everywhere on the same day, and not until 1901 was the control of enumeration placed under the authority of a central bureau, thus greatly reducing the possibility of error in compilation. For the history of population censuses in France see Wolfe, *op. cit.*, pp. 366-68; F. Faure, in J. Koren (ed.), *History of Statistics* (New York, 1918), pp. 217 ff.; Levasseur, I, 292-316; A. Legoyt, *J.d.e.*, 2d ser., XVI (1847), 338-39; W. F. Willcox, *American Economic Review, supplement*, V (1915), 164; A. des Cilleuls, *A.s.m.p.*, CLXXII (1909), 782-94; *A.S.*, XLIX (1933), 13*, note.

Of the population of Gaul in pre-Roman times we know relatively little. Levasseur, on the basis of Roman estimates of the number of Gauls of military age, fixes the population of pre-war France in pre-Roman times at 6.7 millions, or 12 persons per square kilometer, and suggests that the population grew to perhaps 8.5 millions, or about 15.2 persons per square kilometer, by the time of the Antonines.[4] Usher, following Beloch, places the population of the three Gauls and Narbonensis at but 4.9 millions in 14 A.D.; the density of the three Gauls at 6.3 and that of Narbonensis at 15 per square kilometer.[5] Whatever the actual population was, it undoubtedly declined considerably after 200 A.D., as Levasseur suggests, because of the social transformations effected by the barbarian invasions.

The ninth-century polyptique of the Abbé Irminon serves as a basis for the first document-supported estimates. The estimates differ widely, agreeing only in their indication of considerable population growth following recovery from the barbarian invasions. Lot estimates that the ten domains in the Paris region had a population density of between 34 and 42 per square kilometer, or an average density of about 40, compared to a rural density of 41 in twentieth-century France. Whence, assuming the estimated density of 40 to be applicable to all parts of France, it followed that France in the ninth century contained about 20 millions.[6] Levasseur, on the basis of the document used by Lot and several lesser but similar reports on domains, concluded that while the density of population on the cultivated domains was as high as 60 to 72 persons per square kilometer, it was very low in wooded areas, and averaged only 10 for the entire territory studied by him. This density rate, applied to pre-war France, gives a population of but 5.5 millions; to post-war France, about 5.7 millions. Levasseur supposed, however, that average density exceeded 10 in parts of France, and therefore raised his estimate to 8-10 millions.[7] Levasseur's estimate for ninth-century France thus allows for a doubling of population in 800-1328, whereas Lot's implies little growth. Sée rejects Lot's estimate for reasons already given and because inadequate allowance is made for land in woods or not under cultivation—an allowance itself not determinable with accuracy.[8]

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[3] H. Sée, *R.d.e.p.*, XXXVIII (1924), 647-51, 654-55.

[4] Levasseur, I, 99-102, 105. Pre-war refers to pre-1914 France; post-war, to French territory as of 1920 and thereafter.

[5] A. P. Usher, *The Geographical Review*, XX (1930), 116.

The various estimates for 1328, all based upon the same 1328 document referred to earlier, agree rather closely. War, famine, and the spread of monasticism checked population growth in the late ninth, tenth, and early eleventh centuries. Thereafter it grew, attaining an average density of 38-41 persons per square kilometer by 1328. Generalizing this density gives populations of 16-18, 20-22, and 21-23 millions for France as of 1328, 1913, and 1937.[9] Lot, whose estimates are slightly higher than Levasseur's, believes that in 1328, 23-24 millions lived in present-day France, 10-14 per cent of whom were urban.[10] Usher, apparently following Levasseur and Boislisle, concludes that in 1340 the population density in France was about 40 per square kilometer and the population about 21 millions; that already in 1340 the density of population in France had attained the level prevailing just prior to the Industrial Revolution.[11] Sée characterizes Levasseur's estimate as conjectural and not susceptible of proof.[12]

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[6] *Moyen âge*, XXIII (1921), 1-27, 109-37.

[7] Levasseur, I, 124-29.

[8] *R.d.e.p.*, XXXVIII (1924), 647-50. Sée implies that since perhaps one-tenth of the population was urban and since urban population exceeded one million, it is possible that the total population did not exceed ten millions.

[9] Levasseur, I, 140-42, 165-69. For eighteenth-century estimates based upon the 1328 document see H. Baudrillart, *J.d.e.*, 4th ser., XXX (1885), 166-72.

The next century and a quarter, a period embracing the Hundred Years War, famines, and pestilence (especially the Black Death), witnessed a diminution in population, apparently more marked in France than in other parts of Europe. According to Levasseur, the physical checks mentioned, coupled with the preventive checks set in motion, reduced population by one-third to one-half and visited misery upon many survivors.[13] In the ensuing century (*ca.* 1453-1560), according to Levasseur, these losses were largely made up; but with the outbreak of the religious wars later in this century the population diminished somewhat—three-fourths of a million in 1565-80, according to Froumentau.[14] On the basis of Froumentau's estimate of *feux* in 1581 and the assumption of four persons per *feu*, Levasseur supposes that the France of 1581 contained 14 millions at that time; that the area of pre-war France contained 20 millions; that the density was slightly less than in the early fourteenth century.[15] Des Cilleuls estimates that the French population increased about 36 per cent in 1520-60, then declined about 18 per cent in 1560-1600. The evidence suggests that it is unlikely that the population was greater in 1600 than in 1500 or about 1325-40; if anything, the population was less in 1600 than about 1340, for data presented by Usher suggest that density in 1600 was nearly one-seventh less than in 1340.[16]

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[10] *Bibliothèque de l'école de Chartres*, XC (1929), 51 ff., 256 ff., especially pp. 300-01, 405.

[11] Usher, *op. cit.*, pp. 118-19, 122. Usher's figure of twenty-one millions apparently applies to the territory of pre-war or post-war France and not to that of 1328 or 1340.

[12] Sée, *op. cit.*, pp. 650-51, 655; see also Schöne, chap. vi; J. C. Russell, *Social Forces*, XV (1937), 503-11.

[13] Levasseur, I, 176-88, 286; Schöne, chap. vii.

[14] Levasseur, I, 188-89, 206; Schöne, 125-27. J. U. Nef finds that in France industrial growth was more rapid in 1440-1540 than in 1540-1640. See *J.P.E.*, XLIV (1936), nos. 3-5, especially p. 662.

[15] Levasseur, I, 188-93, 286.

During the first three-quarters of the seventeenth century the French population apparently grew, despite the Thirty Years War and the troubles of the Fronde. Des Cilleuls estimates at nearly 50 per cent the increase between 1600 and 1680. Levasseur apparently believed the rate of increase to have been significant but lower than 50 per cent. Sorokin's data on the economic condition of France likewise suggest an appreciable increase.[17] After Colbert's death (1683) war, famine, and the emigration of persecuted Protestants diminished the population, about 14 per cent in 1680-1710, according to Des Cilleuls.[18] The prevailing misery finally led the crown to request reports of the intendants. These reports were submitted in 1698-1700, and serve as the basis of population estimates as of 1700. Levasseur and Des Cilleuls conclude from the reports that the density of population averaged about 40 per square kilometer, or approximately the level as of 1328; that 20,069,000 lived in the kingdom at that time; that the territory comprising pre-war France contained 21,136,000 in 1700.[19] Levasseur's estimates, if valid, indicate that the French population increased somewhat in the seventeenth century, a conclusion supported also by Usher, who relies chiefly on Beloch.[20]

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[16] Usher, *op. cit.*, tables on pp. 119, 121. For other estimates of the French population in the sixteenth century see Levasseur, I, 191, note; *Proceedings*, VII, 293; A. des Cilleuls, *La population de la France avant 1789* (Paris, 1885).

[17] P. A. Sorokin, *Social and Cultural Dynamics* (Cincinnati, 1937), III, 236; Levasseur, I, 194 ff., 286. Willcox (II, 49) concludes that the population of Europe grew very little in 1600-50 because of the Thirty Years War and plagues. While this war cost France only about 40,000 in dead and wounded, other wars in the period 1614-84 raised the French war losses to around 500,000; for France was engaged in war in 63 of these 71 years. During the next 30 years, 24 of which were war years, France lost in killed and wounded at least 660,000, over 160,000 in 1684-1700, and 500,000 in 1701-14. See Bodart, pp. 75-76, 86, 88-89, 92-93, 96-97.

[18] Levasseur, I, 195-201; H. Roberts, *Boisguilbert* (New York, 1935), pp. 1-10, 106-07. According to Levasseur (I, 198), the revocation of the Edict of Nantes and certain preceding measures caused 250,000 to 300,000 Protestants to leave. Schöne estimates that between 1667 and 1715, 500,000-1,000,000 left France because of religious persecution (pp. 176-77).

[19] Levasseur, I, 201-06; A. des Cilleuls, *op. cit.*; Vauban (*Dixme royale*, 1707) concluded from the intendants' reports that France contained 19,064,146 in 1700. As Sée points out, however, the actual returns made in 1698-1700 by the intendants do not enable one to determine with precision the population of 1700; nor do the data permit one to say that the density of population in France did not change between 1328 and 1700. See Sée, *R.d.e.p.*, XXXVIII, 652-53.

Population increased appreciably in the eighteenth century. War and famine reduced the population by 1.5-2 millions in 1700-15, according to the estimates of Levasseur and Des Cilleuls.[21] After 1715 population began to increase, though slowly at first, for misery remained widespread until the middle of the century. It is in part to the diminution in numbers in 1680-1715 and to the slowness with which growth progressed immediately after 1715 that the eighteenth-century fear of depopulation and interest in population questions must be attributed. In 1766, however, Messance concluded, on the basis of the increase in the number of births registered in three *généralités*, that population had increased about 8 per cent in 1700-62, and that France contained a population of 23.1 millions in 1766.[22] Levasseur concludes that the French population increased 6.2 per 1,000 per year in 1715-62, 6.4 per 1,000 per year in 1762-89; that the population grew from about 18 millions in 1715 to 22 millions in 1762, 26.3 millions in 1789, and at least 27,445,297 in 1801.[23] The density of the population slightly exceeded 44 per square kilometer in 1776, approximated 51-52 in 1801.[24] That the population increased notably after 1770, as the above approximate figures suggest, is corroborated by the movement of the excess of births over deaths in all parts of France except Britanny, where the population diminished about one hundred thousand.

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[20] Usher's figures indicate that population density increased about one-twelfth in the seventeenth century (*op. cit.*, p. 121).

[21] Levasseur, I, 213, 221. Sée describes these estimates as unsupported, however (*op. cit.*, p. 653).

[22] Mirabeau had stated a decade earlier that France contained only 18.1 millions. Other writers placed the number at 15 to 16 millions. Expilly, in 1762, on the basis of the reports of the intendants, fixed the population at about 22 millions. Voltaire earlier gave the figure 20 millions, presumably on the basis of Vauban's estimate. See Levasseur, I, 215-16. Buffon estimated the population at 22.7 millions in 1766; Moheau at 24 millions in 1776 (*ibid.*, III, 525).

[23] Levasseur, I, 216-23. The population of France as of 1913 was about 26 millions in 1789; about 27,345,000 in 1801. Between 1783 and 1791 the population of France was estimated at least fourteen times, often by multiplying the reported number of births by a coefficient, based upon an assumed or local crude birth rate. These estimates ranged between 23 and 28 millions, one of 28.9 millions having been reduced to 26.4. In the nineteenth century certain French writers contended that the population of France was 30 millions in 1789, at least 29 in 1801. For a discussion of these estimates see Levasseur, I, 217-18, III, 500-37; M. Fayet, *J.d.e.*, 1st ser., XXXIII (1852), 260-84; H. Baudrillart, *ibid.*, 4th ser., XXX (1885), 161-84; C. Juglar, 1st ser., XXX (1851), 367-80, XXXII (1852), 54-77; H. Sée, *op. cit.*, 653 ff., *R.d.e.p.*, XXXIX (1925), 1282-85.

The materials which we have presented suggest three conclusions among others. First, the rate of population growth fluctuated widely before 1800. G. d'Avenel confirms this proposition in his wage and price studies, even though his estimates of trends differ at times from those of Levasseur and others. According to D'Avenel,[25] population grew steadily in 1250-1350, new increments of population drawing sustenance in part at least from new land placed under cultivation. The ensuing century, one of depopulation, witnessed a great decline in numbers. During most of the period 1450-1600, D'Avenel infers from wage movements, population grew, only to diminish in the following century, particularly in the latter years of the reign of Louis XIV. Not until after 1750 did numbers again begin to grow appreciably. Analogous fluctuations occurred in other countries. Between the early eleventh and the early fourteenth century, population grew appreciably in England and in a part of Germany. The ensuing century and a half was a period of decrease. In the period between the late fifteenth and the mid-seventeenth century, numbers grew markedly in England, Italy, and Germany. The rate of increase fell appreciably in the next three-quarters of a century, only to reach an unprecedented level in the second half of the eighteenth century.[26]

Second, prior to the eighteenth century and the Industrial Revolution, long-run population growth and density were governed almost wholly by the state of applied agronomic science and the adaptability of regions to agriculture; and fluctuations in population growth were governed primarily by fluctuations in agricultural prosperity, in peace and war, and in the physical health of the population.[27] Not until after 1750 did the density of population in France rise much above the level of 40 per square kilometer estimated to have prevailed as early as 1328; it always fell below this level in times of war, crop failure, and pestilence. In the second half of the eighteenth century population density increased about one-fourth, an increase possibly greater than that experienced in the preceding four centuries.

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[24] Levasseur, I, 224, 312.

[25] *Histoire économique de la propriété, des salaires, des denrées et de tous les prix en général, depuis l'an 1200 jusqu'en l'an 1800* (2d ed., Paris, 1914), I, 277, 323-24; III, 16, 115, 386, 424-44.

[26] See W. Abel, *Jahrbücher für Nationalökonomie und Statistik*, CXLII (1934), 674.

Third, France had begun to decline in relative demographic importance even before 1800. While the actual population of France grew between 1325 and 1800, especially between 1715 and 1800, it apparently grew less rapidly than that of Europe as a whole. With a density of population in 1340 exceeded only by that of parts of Italy, France must have contained a larger proportion of the population of Europe than at any time since, for the density of population in other parts of Europe increased relative to that of France in 1340-1800, and in 1800-1900. The French and European populations seem to have been somewhat as follows in millions in 1600, 1650, 1750, 1800: 16, 100; 18, 100; 21, 140; 27.5, 147. Thus it appears that in the modern era, France reached her period of relative demographic dominance about 1650, declining thereafter to 1800 when her population comprised about 14.6 per cent of that of Europe.[28]

During the nineteenth century the actual French population grew by a greater absolute amount than in the eighteenth, and, given allowance for territorial changes, by a greater proportion.[29] The density increased by one-half in 1801-1901 in contrast to one-fourth in 1700 to 1801.[30] The bulk of the nineteenth-century increase in population took place in the first half of the century, however. The population grew 8,690,000 or 32 per cent in 1801-56; 3,563,000 or 10 per cent in 1856-1911. Of the total increase in 1801-1911, 71 per cent occurred in the first half of the period. The comparatively much greater increase in the first half than in the second half of the century is all the more striking, as Malthus observed,[31] in view of the fact that France was considered to be suffering from population pressure at the time of the Revolution,[32] and in view of the fact that heavy war losses exercised a direct and indirect effect upon population growth in the early part of the nineteenth century.[33]

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[27] Neither the nature of the fluctuations nor the economic conditions associated therewith support Abel's view (*op. cit.*, pp. 688-92) that variations in natural fecundity caused the demographic fluctuations. See also Usher, *op. cit.*, p. 122.

[28] See Willcox, II, 49, 78, for population estimates for Europe; also Usher, *op. cit.*, pp. 118-21. P. Mombert rejects the above estimates for pre-1800 Europe, fixing the population in 1650, 1750, and 1800 at 136, 173, and 211 millions. See *Zeitschrift für Nationalökonomie*, VII (Oct., 1936), 545. F. Savorgnan gives somewhat different estimates in *Corso di Demografia* (Pisa, 1936), pp. 47-54.

[29] See Table A for the population of France as reported in the censuses, 1801-1936. The French population grew 11,613,000 in 1801-1901, or 42 per cent. France comprised approximately the same number of square miles, but not quite the same departments, in 1901 as in 1801. Between 1700 and 1801 the actual French population grew from about 20 millions to close to

The sources of French population growth in the nineteenth and present centuries differ markedly from the sources of growth in the eighteenth century. In the eighteenth century the growth was due primarily to the excess of births over deaths. In the period 1800-1930, especially after 1850, natural

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27.5 millions, or about 38 per cent. But French territory increased about 5.6 per cent between 1700 and 1801. Accordingly, if we take the population of the territory of 1801 to have been 21 millions in 1700, the population grew only 31 per cent in 1700-1801. Levasseur (I, 222-23) estimates the annual rate of growth of population in France at 3.3 per 1,000 in 1700-89, at 3.7 in 1801-86.

[30] The number of persons per square kilometer about 1800 and 1925 respectively were approximately as follows for representative European countries: Sweden, 4, 14; Russia, 7, 26; Spain, 22, 43; Germany, 40, 135; United Kingdom, 52, 155; Italy, 56, 131; Holland, 59, 224; France, 51, 74 (from Levasseur, III, 240-41; *A.S.*, XLVIII, 1928, 187). Of course, density per unit of area is no satisfactory measure of demographic density.

[31] Malthus, *Essay* (6th ed.), pp. 175-76.

[32] L. Knowles says that the peasant movement, one of the causes of the French Revolution, arose "out of the fact that France was overpopulated, and could not feed her people in the then stage of her agricultural development" (*Economic Journal*, XXIX, 1919, 21). That France was overpopulated was the opinion of Arthur Young, who estimated the excess at five millions (*Travels in France*, 1792), of some of the physiocrats and revolutionists, and of the *Comité de mendicité de la constituante*. See H. Sée, *R.d.e.p.*, XXXIX (1925), 1282-85; *Economic and Social Conditions in France During the Eighteenth Century* (New York, 1925), pp. 7-10; G. d'Avenel, *Histoire économique de la propriété*, III, 439-44.

[33] Bodart estimates that the wars of the Revolution cost France a million lives, the wars of the First Empire a million, and the wars of 1815-1913 a million. These losses must be increased by 15 to 20 per cent to allow for the permanently disabled. To these estimates must also be added the indirect mortality traceable to war and the children not born who otherwise would have been born. See Bodart, pp. 107, 133, 140, 142, 144, 151-56.

increase provided only a small proportion of French population growth; the larger proportion came from net immigration. France thus differed not only from herself as of the eighteenth century but also from other leading European countries whose population grew because of a large excess of births over deaths and despite a heavy net emigration to foreign countries.[34]

Despite her heavy net immigration, France's population grew much less rapidly in the period 1800-1930 than did that of other leading European powers. During the periods 1800-1900 and 1900-30, respectively, the populations of the following countries increased by the following approximate percentages: Europe, 113, 29; Russia, 164, 24; United Kingdom and Irish Free State, 164, 18; Germany, 127, 14; Italy, 80, 27; France, 43, 6. Approximately the following percentages of the population of Europe lived within designated countries, respectively, in 1800, 1900, and 1930: Russia, 20.8, 26.2, 22.3; United Kingdom, 8.4, 10.6, 10.1; Italy, 9.7, 8.3, 8.5; Germany, 13.0, 14.4, 13.3; France, 14.6, 9.8, 8.5; Austria-Hungary in 1900, about 12. France thus lost the demographic hegemony of Europe in the course of the nineteenth century and continued to decline in relative demographic importance in the twentieth. With a population exceeded in 1800 only by that of Russia, France saw her population outstripped in the nineteenth century by the population of Germany (1850), Austria-Hungary (1880), the United Kingdom (1900), and Italy (after 1930). It is this relative demographic decline which gave rise to the depopulationist literature and the populationist policies described in later chapters.[35]

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[34] During the decades ending in 1880, 1890, 1900, and 1910 respectively, the average annual excess of births over deaths in France was 64, 67, 24, 47; in the United Kingdom, 431, 443, 431, 483; in Italy, 190, 307, 340, 370; in Germany, 511, 551, 730, 867; in Austria-Hungary, in the decades ending in 1890, 1900, and 1910, 386, 561, 539. That is, in these various lands absolute natural increase averaged six to thirteen times as high as in France. The average annual excess of births over deaths in France was in thousands: 1801-1805, 83; 1806-10, 156; 1811-15, 141; 1816-26, 118; 1821-25, 207; 1826-30, 149; 1831-35, 119; 1836-40, 159; 1841-45, 190; 1846-50, 101; 1851-55, 72; 1856-60, 101; 1861-65, 143; 1866-70, 61; 1871-75, 22; 1876-80, 107; 1881-85, 94; 1886-90, 40; 1891-95, 1.4; 1896-1900, 48; 1900-1905, 65; 1906-10, 28; 1911-13, 22; 1914-19, −478; 1920-25, 98; 1926-30, 56; 1931-35, 32. See *A.S.*, XLIX (1933), 11*-13*, 260*-61*. On the effect of migration see Chapters VIII and IX. According to a report of the Minister of Labor in 1927, 54 per cent of the French population were of alien origin dating from the third generation; in 1913, about one-fourth. See *New York Times*, June 17, 1928.

TABLE A. LEGAL FRENCH POPULATION AT DIFFERENT CENSUS YEARS SINCE 1801*
(in thousands)

Year of Census	Area in Square Kilometers	Resident Population		Increase of Population		Inhabitants per Square Kilometers
		Territory at Each Census	Territory of 1921	From Census to Census	Annual per 10,000 Persons	
1801.....	537,699	27,349	28,250	......	....	50.8
1811.....	"	29,350	30,270	......	....	....
1821.....	"	30,462	31,161	3,113	51	56.6
1831.....	"	32,569	33,218	2,107	65	60.5
1836.....	"	33,541	34,240	972	58	62.3
1841.....	"	34,218	34,911	689	40	63.6
1846.....	"	35,400	36,097	1,172	66	65.8
1851.....	"	35,782	36,472	381	21	66.5
1856.....	"	36,039	36,714	256	14	67.0
1861.....	†537,699	36,713	......	678	37	68.3
1861.....	‡550,986	37,382	37,386	1,347	72	67.9
1866.....	"	38,067	38,067	681	36	69.1
1872.....	§550,986	37,653	......	— 414	—18	68.3
1872.....	‖536,464	36,103	37,653	— 1,964	—91	67.2
1876.....	"	36,906	38,439	803	54	68.7
1881.....	"	37,672	39,239	766	41	70.2
1886.....	"	38,218	39,783	547	29	71.2
1891.....	"	38,343	39,946	124	7	71.4
1896.....	"	38,518	40,158	174	9	71.8
1901.....	"	38,962	40,681	445	23	72.6
1906.....	"	39,252	41,067	290	15	73.2
1911.....	"	39,602	41,479	353	18	73.8
1921.....	‖536,464	37,500	......	— 2,105	—56	69.9
1921.....	§550,986	39,210	39,210	— 395	—10	71.2
1926.....	"	40,744	40,744	1,534	78	74.0
1931.....	"	41,835	41,835	1,091	54	75.9
1936.....	"	41,906	41,906	71	3	75.9

*Figures for 1801-1931 from *Résultats statistiques du recensement de la population*, 1921, 1, Part 1, pp. 29-30; 1931, I, Part 1, p. 23; for 1811, see *A.S.* Census to census increases are based upon "rectified" figures which differ slightly from those given in column 3. Levasseur (I, 313) gives slightly different totals. Levasseur's figures for area differ slightly from the above which are based on adjustments after the survey of 1890. Soldiers and sailors outside of France numbered 165,000 in 1856; 63,000 in 1861; 125,000 in 1866; 69,000 in 1901; 85,000 in 1906; 93,000 in 1911; 193,000 in 1921; 179,000 in 1926; 94,000 in 1931; 108,000 in 1936.

†Excluding Nice and Savoy.
‡Including Nice and Savoy.
§Including Alsace and Lorraine.
‖Excluding Alsace and Lorraine.

[35] In 1800, 1900, and 1930 populations were approximately as follows in millions: Europe, 188, 401, 485; Russia, 39, 103, 127; France, 27, 39, 41; Germany, 25, 56, 64; Italy, 18, 33, 41; United Kingdom, 16, 42, 49. Austria-Hungary contained about 45 millions in 1900. The percentage changes based on these figures and given above, while due in part to boundary changes and (in the case of France) to net immigration, are due primarily to natural increase; they reflect the shifts in demographic importance of the leading European countries in 1800-1930. Population estimates for European countries as of 1800 vary. The populations given above are based upon Savorgnan, *Corso*, pp. 48-53; Willcox, II, 33 ff. See also Levasseur, III, 240-41; *Proceedings*, VII, 287 ff.

CHAPTER II

REGIONAL VARIATIONS IN POPULATION GROWTH

In this chapter we shall describe the main regional variations in population growth in France and summarize French reaction to these regional variations. For while population has continued to grow in France as a whole, the rate of growth has varied greatly from department to department, ranging from appreciable decreases in some departments to significant increases in others. The variation from department to department is attributable to wide variations in natural increase by department and to the uneven incidence of interdepartmental migration and foreign immigration.

The number of departments experiencing a sustained decrease in population has risen steadily since 1830. In 1801-31 population grew in every department, assuming adjustments for boundary changes. In 1831-51 a slight decrease was experienced in eight departments, the number registering decreases rising from three in 1831-41 to 22 in 1846-51. Decreases occurred in 49 of the 82 departments in 1851-72, the number ranging by five-year periods from 26 in 1856-61 to 70 in 1866-72. In 1872-91 decreases occurred in 40 departments, the number rising from 27 in 1872-81 to 55 in 1886-91; in 1891-1911, in 60, the number by five-year periods ranging from 55 in 1901-06 to 64 in 1906-11. Decreases occurred in 82 in 1911-21; in 31 in 1921-26; in 44 in 1926-31; and in 64 in 1931-36. While the decrease has been attributable, in many instances, in whole or in part to net emigration, the increasingly preponderant cause has been an excess of deaths over births, traceable to the decline in natality. Of the 45 departments which had an excess of deaths in 1926-31, 22 had lost population in 1851-1931 or 1872-1931, during which periods 41 departments suffered decreases in population. Expressed in terms of total growth, departmental trends may be described as follows: by 1831 three of the 90 French departments had attained a maximum population, thereafter to experience a decline; by 1841, 12; by 1851, 30; by 1866, 42; by 1881, 44; by 1891, 62; by 1911, 72; by 1931, 74. In 1931 but 65 of the 90 departments had a population greater than in 1801; 45 greater than in 1831; 23 greater than in 1901; and only 16, greater than at any previous time. In 1931-36 only 9 of these 16 plus one other (or 10 in all) had greater populations than at any previous time.[1]

The variation in regional growth is most evident when growing and declining departments are compared. The 25 departments which had a smaller population in 1931 than in 1801 lost 1,462,000, or 18.9 per cent, of their population in this period; they contained 15 per cent of the French population in 1931, in contrast to 28.3 per cent in 1801. The eleven losing most heavily lost 30 per cent; the eleven losing 10,000-50,000 lost 14.2 per cent; the remaining three lost only 1.4 per cent. The six departments which gained most heavily in 1801-1931 experienced an increase of 8,774,000, or 302 per cent; this increase comprised 60.6 per cent of all French growth in 1801-1931, the per cent of the population in these departments rising from 10.6 in 1801 to 28.2 in 1931. An increase of 11,976,000 (82.7 per cent of all French increase in 1801-1931), or 182 per cent, was experienced by the 13 departments whose numbers grew steadily in 1801-31, plus the 4 departments whose boundaries were affected by the two transfers of Alsace-Lorraine. In 1931 this group contained 44.4 per cent of the French population; in 1801, 24.1 per cent. In brief, the comparative distribution of the French population has been markedly changed since 1801, inasmuch as five-sixths of all the population growth has been concentrated in one-fifth of the departments.

The changes in departmental populations just noted are traceable in a large degree to the long continued drift of the population toward cities. How extensive this drift was prior to 1846 is not determinable. In the seventeenth century the towns were few in number and small in size; the population was concentrated in villages.[2] In the late eighteenth century, according to the estimates of contemporary demographers, 20 to 25 per cent of the population was urban. If urban is defined as at present, these percentages are too high, for in 1819 but 14 per cent of the population lived in cities of 5,000 and more and as late as 1846 only one-fourth of the population was urban. As late as 1821 only 8.8 per cent of the French population lived in prefectures, then ranging in population from 1,500 to 721,000; this percentage had increased to 16.9 by 1891, the population of the prefectures having increased 145 per cent in contrast to an increase of 17 per cent in that living outside the prefectures.[3] In 1787, according to Levasseur, France contained 78 cities, exclusive of Paris, with a population of 10,000 or more. These cities contained 1,950,000 inhabitants. If we add thereto the population of Paris (not over 650,000 in 1787), we get a population of about 2.6 millions living in cities of 10,000 and over in 1787, or about 10 per cent of the entire French population. In 1931 French cities of 10,000 or more numbered 399 and contained 16,035,000 inhabitants, or 38.3 per cent of the population. Accordingly, the population living within cities of 10,000 or more increased 517 per cent in 1787-1931, whereas that living outside cities of this size increased only 10 per cent. Between 1866 and 1931, while the total population was increasing 9.9 per cent, that living in communes of over 5,000 increased 105 per cent; the population living in communes of 1,000 and under and 1,000-5,000 decreased respectively 13 and 27.5 per cent; the proportion of the population living in communes of over 5,000 increased from 24.4 to 45.6 per cent. In short, it is within the towns and cities, especially the larger cities, that the greatest population growth has taken place during the past century and a half.

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[1] Census, 1931, I, Part I, pp. 25-36, 92-101; *Bulletin,* XXVI (1937), 280. The Rhenish departments are not included in the 16.

Between 1846 and 1931 the urban population (i.e., living in communes whose chief community contains an agglomerated population of over 2,000) increased 146 per cent, while the rural declined 24 per cent; the total increased 18 per cent. Between 1846 and 1866 the total rural population declined from 26.76 to 26.47 millions; after the Franco-Prussian War, from 24.87 in 1872 to 23.49 in 1896, 22.1 in 1911, 20.76 in 1926, and 20.41 in 1931. The urban population increased from 8.65 millions in 1846 to 15.03 in 1896, 17.51 in 1911, 19.98 in 1926, and 21.42 in 1931. In short, between 1846 and 1931 the total population increased 6.43 millions; the urban, 12.77; the rural population declined 6.35 millions. The proportion classified as urban increased from 24.4 per cent in 1846 to 39.1 in 1896, 44.2 in 1911, 49.1 in 1926, and 51.2 in 1931. These changing proportions are reflected in the changing occupational composition. For between 1866 and 1931 the absolute number employed in agriculture, forestry, and fishing (of whom 98.4 per cent were in agriculture in 1931) increased only 6.6 per cent, whereas the number engaged in other occupations increased 75.8 per cent. Other changes in occupational composition are summarized in Table I.[4]

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[2] A. P. Usher, *The History of the Grain Trade in France* (Cambridge, 1913), pp. 207-08.

[3] See G. Richard, *Proceedings*, IX, 423-26.

Despite the magnitude of urban growth in France, comparative data indicate that deruralization and urbanization have proceeded less far in France than in other Western European

TABLE I. OCCUPATIONAL COMPOSITION AND CHANGES, 1866-1931*

Occupational Category	Percentage of Employed in Each Occupational Category			Percentage Change		
	1866	1906	1931	1866–1906	1866–1931	1896–1931
Agriculture, Forestry, and Fishing	52.2	44.8	37.0	—14.2	—19.1	—17.6
Industry and Transportation	33.6	36.5	40.7	+ 8.6	+21.1	+11.5
Commerce	7.0	10.5	13.4	+50.0	+91.4	+27.6
Liberal Professions	2.4	2.4	3.2	00.0	+33.3	+33.3
Public Services and Army	4.8	5.8	5.7	+20.8	+18.7	— 1.7
Total	100.0	100.0	100.0	....	....	....

*Taken or computed from Census of 1931, I, Part III, p. 10.

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[4] Of each 10,000 employed in agriculture, industry, trade, commerce, and the liberal professions, the respective numbers by occupation were as follows in 1856 and 1891: agriculture, 5,294 and 4,733; industry, 2,907 and 2,589; trade and commerce, 453 and 1,076; liberal professions, 906 and 1,082.

countries, particularly since 1870. (It is evident, therefore, that the decline in natality in France is attributable in a lesser degree than is the decline in many other countries to natality-depressing factors specifically associated with urbanization.) About 1930 the proportion of employed engaged in agriculture was greater in France than in Great Britain, Germany, Belgium, Austria, Switzerland, Norway, and Denmark; approximately the same as in Czechoslovakia and Sweden; less than in other European countries.[5] Moreover, in France, as the figures in Table II indicate, a relatively larger proportion of the population lived in places under 5,000 and a smaller proportion in places of 20,000 and over than in representative West European countries. France, in short, as H. W. Singer's Paretian curves of population show, stands out "as the country in which small towns predominate," and remains the "only country where in recent years [at least since 1872] there seems to have been no tendency towards metropolisation, and where the proportion of small to large towns has been preserved and actually increased."[6] Communes containing 5,000 or less inhabitants have continued to comprise 96-98 per cent of all French communes ever since 1851.

TABLE II. DISTRIBUTION OF POPULATION, BY SIZE OF COMMUNITY, 1930*

Country	Percentage of Total Population Living in Places of Designated Size			
	0–5,000	5,000–20,000	20,000–100,000	100,000 and over
France	54.4	14.7	15.1	15.7
Germany	43.7	13.2	12.9	30.2
Italy	30.2	33.6	18.9	17.4
Belgium	39.4	28.0	20.9	11.6
Holland	21.2	30.1	21.5	27.2
England and Wales	22.7	12.5	25.1	39.8
Rumania	80.4	6.2	7.5	5.9

*Computed from *A.S.*, L (1934), 233*-34*.

The small-community population has declined relatively less and the city population has grown relatively less in France than in other Western European countries in the past sixty years. The proportion of the population living in places of 0-5,000 declined about one-third in Germany, Italy, and Belgium in 1880-1930; in France, slightly less than one-sixth. The proportion of the French population that was rural declined one-fourth in 1880-1930, in contrast to declines of one-seventh and one-third in Scandinavia and England and Wales. The population did not tend to concentrate in cities of 100,000 and over in the same degree in France as in Europe in 1800-1930, the proportion of French living in cities of that size rising from 2.8 per cent in 1801 to 8.2 in 1866 and 15.7 in 1931; corresponding percentages for Europe approximate 1.6, 6.7, and 16.6. The proportion was higher in 1800 in Holland, Great Britain, Italy, Spain, and Portugal than in France; it remained higher about 1870 only in Great Britain and Holland, for during the first two-thirds of the nineteenth century the French population crowded into cities of 100,000 and over at nearly as high a rate as did the German and British. In 1866-1930, however, urbanization proceeded more rapidly in other parts of Europe than in France, Great Britain, and Holland, with the result that today France has relatively less population in cities of 100,000 and over than Europe as a whole.[7]

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[5] L. E. Howard, *Labour in Agriculture* (London, 1935), p. 42; *A.S.*, LI (1935), 243*.

[6] *Economic Journal*, XLVI (1936), 259-60.

H. Haufe's data[8] roughly corroborate our findings as stated above, particularly the proposition that urbanization has proceeded less rapidly in France than in Europe since 1870. About 1815 a larger percentage of the population (14) lived in cities of 5,000 and over in France than in twelve of eighteen other European countries. During the period 1815-1925 France's nonurban population (as defined by Haufe) increased only 5 per cent, actually declining after 1870, whereas that in every other European land but Ireland increased appreciably in both periods. France's low nonurban growth rate was counterbalanced, however, by her low urban growth rate. In 1925 the population of French cities of 15-50 thousands was 5.3 times as great as in 1819; of cities of 50-100 thousands, 2.9; of cities of over 100 thousands 4.2; of all cities of 15 or more thousands, 3.8. Corresponding figures for eight representative European countries range respectively as follows: 3.0 to 8.7; 2.6 to 13.5; 4.3 to 14.1; 4.3 to 11.0. Moreover, since 1870, the percentage increase in the population in each of these urban categories has been much smaller in France than in other European countries. Further, since 1870 the proportion that is urban (as defined by Haufe) has increased relatively less in France than in nine of eighteen other European lands. In brief, if it may be said that urbanization had progressed farther in France than in many European lands by 1815, and that the pace of urbanization was maintained in the next half-century, it may also be said that since about 1870 urbanization has proceeded more rapidly in Europe as a whole than in France.

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[7] These figures are computed from Meuriot and from *A.S.*

[8] *Die Bevölkerung Europas* (Berlin, 1936), especially Tables 8 and 14 in Appendix.

French urban population growth is essentially the product of immigration from the French rural population and from foreign countries. Prior to the nineteenth century, when deaths usually approximated and often exceeded births in cities, urban growth was due almost solely to immigration. (This seems to have been especially true after the sixteenth century when urban concentration proceeded in the absence of improvements in public hygiene.) Net immigration into urban areas contributed 96 per cent of all urban population growth in 1876-91, 97 per cent in 1891-1911, and 90-95 per cent since 1921. In 1931 the 10 most urban departments included 7 of the 10 ranking highest in proportion of natives born outside the department, 4 of the 10 highest in proportion of foreigners in the population, and 7 of the 10 highest in absolute number of foreigners. Paris, which has drawn population from a wider area than any other French city, has grown predominantly through net immigration, four-fifths of its growth in 1821-91 being attributable to this source. In 1872-91, when the proportion of urban growth due to net immigration ranged from 15 to 100 per cent in the leading French cities, the proportion for Paris was 80 per cent. The proportion rose from 75 per cent in 1872-96 to 93 per cent in 1926-31. In 1931 about 67 per cent of the Parisian population consisted of persons born outside Paris; in 1911, 61; in 1891, about 59; in 1833, at least 60-65. In 1931 about 66 per cent of the French population of Paris consisted of French born outside Paris; in 1911, 61; in 1901, about 61.[9]

For at least three quarters of a century immigration has been the main direct source of population growth in departments whose numbers have continued to grow; emigration has been an important source of depopulation in many departments whose numbers have declined. (Migration has influenced French population growth indirectly by carrying migrants from areas where the local cultural pattern was more or less favorable to natality to areas where it was less or more favorable.) Prior to 1840 natural increase was usually sufficient to counterbalance net emigration in most departments. In 1821-40, when net emigration took place in 22 of 86 departments, population declined in but 3 departments, in one chiefly because of net emigration, in 2 chiefly because of an apparent excess of deaths. In 1846-65, when net emigration took place in 61 of 84 departments and population decreased in 33 departments, depopulation was attributable in whole or in part to an excess of deaths in at least 12 departments; in at least 3 departments an excess in deaths was more than offset by net immigration. In 1866-86 deaths exceeded births in 34 of 86 departments; population decreased in 39 of 86 departments; net emigration was experienced in 60 of the 86 departments. Of the 39 departments suffering a loss of population, 7 suffered this loss because of excess deaths, 14 because of net emigration, 18 because of excess deaths and emigration. Of the 47 experiencing population growth, 28 experienced growth because of excess births, 9 because of immigration, 10 because of excess births and immigration. Sixteen of the 34 departments with excess deaths experienced net immigration; only 10 of the 52 departments with excess births experienced immigration. In short, there was a tendency for migrants to move from departments with excess births into departments with excess deaths. In 1926-31, when deaths exceeded births in 45 of 90 departments and population increased in 46, in but 21 of these 46 was the growth attributable in whole or in part to natural increase; in 25 of the 45 departments with excess deaths, net immigration more than counterbalanced natural decrease. Since the 45 departments with excess deaths included 30 of the 44 which experienced net immigration, it appears that migrants favor areas of natural decrease—presumably because the latter are more urban. Of the 16 departments whose population grew steadily in 1801-1931, none had an excess of deaths in 1821-40, 4 in 1846-65, 7 in 1866-86, these same 7 plus 2 others (9 in all) in 1926-31. The increasing importance of immigration as a source of population growth, revealed in the preceding figures, is evident also in the increase in the percentage of French living outside the department of birth from nearly 12 in 1861 to 15 in 1872, 17 in 1891, and 25 in 1931.[10]

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[9] Data taken or computed from Levasseur, III, 314-15; Census, 1931, I, Parts I-II; A. F. Weber, *The Growth of Cities* (New York, 1899), pp. 238, 240, 245; Meuriot, pp. 88-90, 313, 318-20, 433. On Paris see also A. Landry, *J.S.S.P.*, LXXVII (1935), 34-45; H. Bunle, *Bulletin*, S.G., XXVI (1937), 474-89.

In 1931-36, 36 departments gained population, 11 through natural increase, 17 through net immigration, and 8 through natural increase and net immigration. Of the 7 which lost population in 1931-36, after having gained steadily in 1801-1931, 2 lost through net emigration, 5 through natural decrease and net emigration; at least 4 lost solely or chiefly because of foreign emigration traceable to depression in the industrial departments. Of the 9 departments which continued to gain in 1931-36, after having gained steadily in 1801-1931, 5 gained solely through net immigration, 2 through natural increase, and 2 through natural increase and net immigration. Of the 23 departments which gained in 1921-31, after declining prior to the World War, only 12 gained in 1931-36, and but 5 of these gained in whole or in part because of natural increase; of the 11 experiencing a loss, 6 lost in whole or in part because of an excess of deaths. Of the 15 departments which gained in 1931-36, after having failed to gain steadily in 1921-31, 5 gained solely through natural increase; 6 through net immigration. Comparative rates of growth by department in 1931-36 differ from the comparative rates observed in 1921-31 largely because the economic depression reduced interdepartmental mobility and the relative number of foreign workers in the industrial departments.[11]

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[10] *Ibid.*

The departments in which nonagricultural employments predominate have experienced the greatest absolute growth in France, primarily because migrants are attracted to such departments. The arithmetic average of the departmental gross reproduction rates in the 10 departments with a greater population in 1936 than at any previous date was about 1.220 in 1911 and 1.009 in 1931; corresponding rates in the 16 departments with a greater population in 1931 than at any previous date were about 1.233 in 1911 and 1.042 in 1931. For France as a whole the gross reproduction rate in 1911 was 1.221; in 1931, 1.100. The rate necessary for replacement was 1.326 in 1911; 1.201 in 1931. It is evident, therefore, that the average true rate of natural increase in the departments experiencing continued population growth long has been and remains both negative and below the national level.[12]

Among the 10 departments with a larger population in 1936 than at any previous date are found 5, 6, and 9 respectively of the 10, 11, and 20 least agricultural departments as measured in terms of the relative number of active males engaged in agriculture; 8 of the 10 most commercial departments; 6 of the 20 most industrial departments; 9 of the 15 most industrio-commercial departments; 6 and 8 respectively of the 10 and 20 most urban departments. Among the 16 departments with a greater population in 1931 than at any previous date are found 10 of the 16 least agricultural departments; 9 of the 16 leading industrial departments; 12 of the 17 most commercial departments; 11 of the 16 most industrio-commercial departments; 12 of the 16 most urban departments; but one essentially agricultural department; 11 of the 16 departments with the greatest number of foreigners; 9 of the 16 with the largest proportion of foreigners; and 9 of the 16 with the largest proportion of the native population born outside the department. In but 4 of the 16 was relative net immigration below the national average for departments experiencing immigration. Turning to the 23 departments which attained a maximum population by 1911 or earlier but which have experienced a renewal of population growth since 1921, we find chiefly departments where agriculture is relatively less important than industry and mining; where (in all but three instances) the absolute and/or relative number of foreigners is great. In 14 of the 23 net immigration counterbalanced excess mortality in 1926-31.

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[11] The above figures are based on the 1936 census returns and birth-death returns in 1930-35; for unemployment data see Census, 1931, I, Part III, p. 69.

[12] See Chapter IV for sources of data. The above averages exaggerate the level of gross reproduction in the growing areas, inasmuch as more than half the population is concentrated in departments with the lowest gross reproduction rates.

That a predominance of agricultural employments is unfavorable to population growth in so far as such growth is fostered by net immigration, or by absence of emigration, is equally evident. The 25 departments whose population was lower in 1931 than in 1801 included 13 and 22 respectively of the 25 and 45 least urban departments and none of the 30 most urban; 12, 18, and 25 of the 25, 45, and 65 most agricultural departments. The departments which experienced a decrease in population in 1851-1931, or in 1872-1931, were three times as numerous in the 45 most agricultural departments as in the 45 least agricultural departments; in 1931 no department had as great a rural population as it contained prior to the World War. Even as early as 1896 only 14 of the 87 departments for which comparable data are available had a rural population greater than at any time during the preceding fifty years. Of the 14 departments whose rural population increased in 1926-31, 10 are not classifiable as agricultural and include relatively and absolutely large numbers of foreigners whose coming has contributed directly and indirectly to the recent rural growth. Of the 7 departments within which the rural population increased relatively more than the total in 1926-31, 5 were not agricultural; within the 2 agricultural and within 3 of the 5 non-agricultural departments the foreign population increased by a greater percentage than in the nation as a whole.[13]

[13] The above figures are computed from Census, 1931, I, Parts I-III.

The data presented indicate that population growth has been greatest in departments with elastic nonagricultural employments; least (i.e., negative) in agricultural departments, especially in those that are mountainous, wooded, and relatively infertile. Migration has been the main source of growth in most of the nonagricultural departments, and migrants have moved into departments where locational advantages have permitted the development of industry, mining, and maritime commerce, and, as a consequence, the growth of urban centers. Agricultural departments, on the contrary, have not offered comparable opportunities for employment, with the result that the consequent emigratory stream, coupled with the low rate of natural increase, has reduced the population of such departments.

The migrants have tended in general to move from lower to higher money wage areas. In 1931 the 45 departments ranking highest in terms of money wages paid to common labor in October, 1929, included 29 of the 45 departments ranking highest in percentage of native French born outside the department; the 22 highest in wages included 13 of the 22 highest in percentage of French born outside the department. The 16 departments with a greater population in 1931 than at any previous time included 10 of the 13 departments ranking highest in per capita income and at least 8 of the 20 departments ranking highest in wealth.[14]

Many factors have been advanced at various times to explain the migratory drift of the population from rural areas and from certain departments to urban and industrial areas: the expulsive factors in rural life (e.g., low wages, introduction of machinery, ravages of phylloxera and other plant diseases, subdivision of property, agricultural crises and uncertainties, ennui of rural life, hardships and inconveniences in rural regions, the disappearance of traditional customs, reforestation programs, and the ravages of floods and landslides and deforestation in mountainous districts); lack of rural credit-providing agencies; conscription; the recreational and cultural advantages of urban life; the higher wages and productivity in urban industry; the redistribution of industry made possible or necessary by the development of railroads and of new productive techniques, by the imposition of new tariffs, and by the unequal geographical distribution of the tax burden; and the inordinately large proportion of the public revenue expended in the large cities.[15]

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[14] Migration and wage data computed from Census, 1931, I, Part II, p. 67; *A.S.*, XLV (1929), 248. See Chapter IV for wealth and income data.

While it is not our purpose to analyze in detail the factors affecting population redistribution in France,[16] it should be remarked that the development of railroad transportation in France, having made possible the concentration of industry and commerce and the migration and urbanization of population, served to permit the *continuation* of internal migration, rather than to elevate appreciably the *rate* of internal migration. For in 1821-40, when there were virtually no railroads, native interdepartmental migrants averaged about 7 per 1,000 native inhabitants; corresponding rates in 1846-65, 1872-91, and 1926-31 approximated 11, 9, and 9. Presumably, had railroad transportation not developed, the migration-promoting factors operative in 1821-40 would soon have exhausted themselves; but, given transportation development, new migration-promoting factors were enabled to fructify and to continue to foster resettlement.[17]

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[15] In 1855, according to Lavergne, more than one-third of all public revenues were spent on urban centers, particularly Paris (*J.d.e.*, 2d ser., XXI, 1859, 221, XXII, 422). About this time and in the sixties it was commonly accepted in France that prodigal spending was essential to the health of trade (*Cambridge Modern History*, New York, 1909, XI, 303). Among the books and articles on rural depopulation see the works of Mauco and Meuriot; H. Doutouquet, *De la condition des classes pauvres à la campagne* (Paris, 1846); M. Repecaud, *Des moyens proposés pour améliorer le sort des ouvriers agricoles et mettre un terme à la dépopulation des campagnes* (Academy of Arras, 1850); J. Brame, *De l'émigration des campagnes* (Paris, 1858); L. de Lavergne, *L'agriculture et la population* (Paris, 1865); A. Legoyt, *Du progrès des agglomérations urbaines et de l'émigration rurale* (Marseille, 1887); P. Déghilage, *La dépopulation des campagnes* (Paris, 1900); E. Nicolai, *La dépopulation des campagnes et l'accroissement des villes* (Paris, 1903); L. Dumas, *La dépopulation des campagnes* (Paris, 1900); A. Megnier, *Le paysan et la crise rurale* (Paris, 1902); J. Guillau, *L'émigration des campagnes vers les villes* (Paris, 1905); G. Aubart, *Contre la dépopulation des campagnes* (Paris, 1907); S. G. de Laharpe, *La dépopulation des campagnes* (Paris, 1909); L. A. Fabre, *L'état et la dépopulation montagneuse* (Paris, 1909); works cited by Tugwell (see below); articles in *Réforme sociale* and *Le musée social* and in *J.d.e.*, 1st ser., XII (1845), 235; 2d ser., XIII (1857), 335, XXI (1859), 213-25; 3d ser., VII (1867), 332-44; 6th ser., LXXVIII (1921), 121-22, LXXXI (1925), 270-72; *Le correspondant*, CCXXIV (1924), 1065-72; *J.R.S.S.*, XLVIII (1885), 666, XLIX (1886), 452.

[16] See the present writer's discussion of this problem in the United States in articles in the *Southern Economic Journal* (1937).

The urbanward drift of the French population was condemned in eighteenth-century France by the Physiocrats, by non-Physiocratic agrarians, and by many of the authors of critical social treatises. In the nineteenth century (and even in the present century) it was condemned by writers who saw (and continue to see) in this drift an aggravation of evils allegedly attributable to urbanization and the chief cause of a scarcity of agricultural labor and a relative decline in the importance of agriculture.

Whether or not there is a shortage of farm labor in France depends upon one's definition of shortage. Migration has reduced the absolute supply of labor in rural areas, especially that of day laborers and farm servants.[18] For despite increases in 1906-31 of nearly 170,000 and over 100,000 respectively in the number of foreigners gainfully employed in agriculture and in the number of foreign laborers in agriculture, the gainfully employed and laborer categories in agriculture declined about 1,150,000 (13 per cent) and about 535,000 (20 per cent) in 1906-31. The total number of labor-employing establishments in agriculture has declined nearly 250,000 since 1906, and nearly 300,000 since 1921. The declines in 1906-31 in establishments with 1, 2, 3, and 4 or more workers have been 17, 16, 21, and 30 per cent respectively.[19] The decline in rural population, therefore, has led to an increase in the *relative* number of small and family-operated establishments and has checked the growth in the number of large establishments employing several or more workers. The latter type will tend to develop only in areas with heavy immigration of foreign agricultural labor.[20] It may be said, therefore, that there is a shortage of agricultural labor if the term "shortage" implies a relative lack of hired labor for the operation of large agricultural establishments. It may be said, too, that the relative shortage in French agriculture has become more pronounced than in other countries, for in France agricultural wages have risen more than in countries like Italy, hours of work have fallen, and strikes have been frequent.[21]

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[17] The above rates are computed from Meuriot and from the census of 1931. On conditions influencing migration and departmental growth see Levasseur, I, 421-53, III, 314-18; Meuriot, pp. 83-120, 281-308; G. Richard, *Proceedings*, IX, 426-33. See also W. P. Hedden, *How Great Cities Are Fed* (New York, 1929).

[18] Mauco, p. 28, note, pp. 80-84; J. H. Clapham, *The Economic Development of France and Germany* (London, 1923), p. 168. In other countries, too, hired labor has left the farms in relatively the greatest proportions. See Howard, *Labour in Agriculture*, pp. 45-48.

[19] Census, 1931, I, Part III, pp. 79-80; Part V, pp. 52, 63.

In terms of equilibrium economics no shortage of agricultural labor exists in France. For since agricultural wages average but two-thirds of nonagricultural wages,[22] it is evident that urbanward migration is elevating the over-all marginal productivity of French labor. Moreover, inasmuch as improvements in agricultural methods would enable greater production by fewer hands, it is apparent that the inability of French agricultural entrepreneurs to get as much domestic and foreign "labor power" as they desire at present rural wage levels is traceable in part to managerial inefficiency in the use of labor.

With the decline in the size of the French rural population has been associated a diminution in the absolute and the relative amount of land under cultivation (see Table III), the proportion under cultivation falling from about 49 per cent of the landed area in 1862-82 to about 38 per cent in 1934. Although the yield per hectare of most crops has risen since 1892, despite an increase of about one-seventh in the amount of land in any agricultural use per person gainfully employed in agriculture, the physical volume of agricultural production has apparently fallen. The acreage decline has been most pronounced in cereal crops, for despite French efforts to avoid a shift from cereal production and to preserve a balanced, self-sufficient agricultural economy, the absolute and the relative importance of cereal production has fallen in France as in other Western European countries.[23] This shift, while due in part to changes in consumption habits, is attributable in some degree to the slowness of French population growth and to the accompanying emigration from rural to urban areas.

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[20] *I.L.R.*, VIII (1923), 187; L. Drescher, *Berichte über Landwirtschaft*, XIII (1930), 245-69.

[21] See M. Augé-Laribé, *L'évolution de la France agricole* (Paris, 1912); *I.L.R.*, XXV (1932), 43-47; Howard, *Labour in Agriculture*, pp. 75, 214-18, 322-25.

[22] The ratio of agricultural to nonagricultural wages is higher in France than in some European countries, lower than in others. See *Encyclopaedia of the Social Sciences*, XV, 314.

TABLE III. DISTRIBUTION OF LAND IN AGRICULTURE*
(thousands of hectares)

Year	Total Territory	Land in Cultivation, Fallow, or Meadow	Wheat and Other Grains	Other Crops, Market Gardens, Shrubs	Grass, Pasture, etc.	Vines	Woods and Forest	Uncultivated, or Not Included Elsewhere
1862........	54,308	26,569	13,707	†13,665	5,021	2,321	9,317	†6,570
1882........	52,857	25,588	13,923	12,937	5,537	2,197	9,455	†8,519
1910........	52,956	23,679	12,947	12,104	10,062	1,685	9,329	6,827
1934........	55,099	21,074	10,481	11,461	11,313	1,617	10,559	9,667

**A.S.*, LI (1935), 66*-71*.
†Approximate.

Even though many French repopulationists have favored rural reorganization as a means to stimulate population growth, governmental policy with respect to French agriculture until recently has been designed primarily to preserve agricultural self-sufficiency; it has been based in only a minor degree upon the supposition that peasants constitute the backbone of an army.[24] Moreover, until recently the proposals to prevent rural depopulation have not emphasized population growth as such; instead they included such as the following: the removal of the previously enumerated causes of rural depopulation; the improvement of agricultural methods and the elevation of the level of the agricultural worker's productivity and remuneration to parity with urban levels; the decentralization of government; the diffusion of urban attractions and advantages throughout the countryside; rural electrification; the easing of agricultural labor through the installation of agricultural machinery; and the development of a spirit of co-operation.[25] Recently, however, emphasis has been placed upon natural increase as such. It was recommended in the report of the Sixteenth French Congress on Family Allowances (May, 1936) that family allowances be extended to rural families to prevent rural emigration and keep the population in more prolific areas. In August, 1936, family allowances were extended to agriculture.[26] Presumably, as it is more and more realized that rural areas are more favorable to natality than urban, increasing emphasis will be placed upon aids for the rural population.

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[23] R. G. Tugwell, *Political Science Quarterly*, XLV (1930), 217.

[24] *Ibid.*, pp. 220, 224, 547.

[25] On means of checking rural depopulation see references cited in note 15, and M. Andre, *R.p. et p.*, CXXXVII (1928), 430-40.

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[26] *M.L.R.*, XLIII (1936), 699-700, 1489-90; *Mercure de France*, CCLXXIII (1937), 261-73.

CHAPTER III

NATURAL INCREASE IN FRANCE 1650-1935

THIS CHAPTER consists of two parts: (a) devoted to statistical and other materials pertaining to natality, mortality, and the attitude toward childbearing in the pre-nineteenth century era; (b) devoted to a comparative statistical description of natality and mortality trends in France since 1800. Differential fertility will be treated in the next chapter.

Before 1800, according to the estimates and materials available,[1] French natality varied from region to region, at least equalled that observed in Western Europe, fell below that of New France,[2] and exceeded that prevailing in nineteenth-century France. French natality approximated 39 per 1,000 shortly after 1750, according to Expilly; 39 in the 1770's, according to Moheau, who believed the urban rate to be perhaps one-third below the rural rate; 38-39 in 1781-89, according to Necker, who believed the rate to range between 33 in some urban centers and 40 in regions marked by high fertility. Crude birth and death rates approximated 37 and 30 in 1778-87, according to Levasseur; the number of births per 1,000 deaths (ranging by region from 915 to 1,343 in 1778-87) averaged 1,149 in

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[1] Pre-1800 French birth and death rates are but approximations. Unless otherwise noted the pre-1800 data have been taken from R. R. Kuczynski, *The Balance of Births and Deaths* (New York, 1928), I; Messance, *Recherches;* Moheau, *Recherches*, I, 32-65, 129-221; Buffon, *Oeuvres complètes* (Paris, 1836), IV, 332-58; summaries in Levasseur, I, 251-56, and in M. C. Buer, *Health, Wealth, and Population* (London, 1926), chap. iii; J. Bertillon, *Dépopulation*, pp. 119-24; J. Mathorez, I, 1-80. For comparable English data see C. T. Griffith, *Population Problems of the Age of Malthus* (Cambridge, 1926), pp. 28, 31, 36.

[2] In Canada in 1680-82 births per 1,000 French married women, aged 16-50, numbered 338; per 1,000 French women in Canada and aged 16-50, 263. Natality remained on a high level (over 50 births per 1,000 inhabitants per year) until after 1850. Many of the 10,000 French who immigrated into Canada between 1608 and 1760 came from Normandy where fertility in France apparently was relatively low. See G. Langlois, *Histoire de la population canadienne-française* (Montreal, 1934), pp. 14, 59-60, 111, 156, 246, 256.

1771-80 and 1,086 in 1778-87 in contrast to 1,118 in 1876-85, and 1,048 in 1931-35.[3] Birth rates ranged between 31.3 and 37.1 in Sweden and 37.5 and 45.3 in Finland in 1751-1800; rose, in England in 1700-95, from about 27.5 to 35.44. B. de Chateauneuf, who fixed the French rate about 1825 at 31, estimated the rate in Northern and Western European countries at 36 about 1780 and 33 about 1825. Messance estimated at 42, 40, and 36 the rates in the generalities of Lyon, Auvergne, and Rouen about 1760. Moheau, a few years later, estimated the rates in Normandy to range between 35 and 43; fixed the rates in Touraine and Rouen at 30 and 34 in urban centers and 42 and 38 in nonurban communities. In Paris crude natality fell from 35.1 in 1750-59 to 33.3 in 1780-89, then rose to 35.1 in 1799-1808 and 36.2 in 1817-30, thereafter to fall steadily.[4]

The ratio of births (usually legitimate and illegitimate) to marriages—an unsatisfactory index of fertility used frequently in the eighteenth and nineteenth centuries[5]—suggests regional variations in fertility. Observed chronological variations in the ratio do not suffice, however, to validate Bertillon's conclusion that fertility did not fall until after the French Revolution, or Des Cilleuls's contrary opinion that fertility was declining before the Revolution.[6] Bezard found an average ratio of four births per marriage in the region south of Paris in 1540-60, the ratio varying somewhat from place to place.[7] Moheau found the ratio to range by region between 3.63 and 4.65 in the closing decade of the seventeenth century, between 3.30 and 4.81 in the sixth decade of the eighteenth century. The ratio for France, about 4.8 in the 1770's, according to both Moheau and Levasseur, had fallen to 3.3 in 1862-66 and to 2.1 in 1922-26. According to Bertillon, the ratio in Paris, 5.2 in 1670-84, ranged for twenty-year periods between 3.8 and 4.6 in the eighteenth century, and approximated 4.3 in 1801-20. According to Moheau, the ratio was higher in his day in France than in Prussia, Russia, or Scandinavia.

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[3] III, 509; I, 270-72; *A.S.*

[4] Cf. rates in Levasseur, II, 395; Bertillon, *op. cit.*, p. 122.

[5] As Kuczynski has shown (*The Measurement of Population Growth*, New York, 1936, chap. ii), the ratio of births to marriages is a very unsatisfactory measure of fertility, the number of births being influenced appreciably by the fertility of those married for some years. Thus in France as late as 1911-13, 48.7 per cent of all legitimate births were to mothers married for five or more years (M. Huber, *La population de la France pendant la guerre*, p. 686). The ratios given in the above paragraph are based on legitimate plus illegitimate births.

[6] See preceding note. See Des Cilleuls, *La population* (Paris, 1902), pp. 91-93.

[7] Yvonne Bezard, *La vie rurale dans le sud de la région parisienne de 1540 à 1560* (Paris, 1929), p. 211.

Mortality, the chief pre-nineteenth century check to population growth in France,[8] was high, especially among those aged 0-10 years, among whom the relative number of deaths was about 50 per cent greater in 1778 than in 1889.[9] Buffon estimated the average prevailing mortality at about 29 per 1,000; Necker, at 33; Moheau, at 33, with the rate ranging from 32 to 38 in parts of France. These rates compare with rates of 25.7-33.4 in England in 1700-95; 24.9-33 in Sweden and 23.8-32.3 in Finland in 1751-1800. De Chateauneuf, who fixed the French, European, and North European rates in 1825 at 25, 25+, and 24, estimated the French and North European rates at 33 and 31 about 1780. In Paris, where, according to Bertillon, the rate in 1781-1805 ranged between 36 and 49 (Deparcieux had estimated the rate in large cities at 40), deaths exceeded births for the entire period 1670-1800, deaths exceeding births in about half the years.

Moheau found that of the general population at least half died in the first ten years of life, and of the foundlings, about two-thirds;[10] that about one-fourth of the newborn died in the first year, and another eighth in the second and third years.[11] The data on family size reflect this high mortality. But 2 per cent of the families had 6 or more children living, according to Moheau;

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[8] Mathorez estimates that five births per marriage were necessary to replace the population (I, 31); F. de Villeneuve (pp. 33-40 of work cited below) estimated that about 1760 four children were required to replace a family.

[9] Levasseur, I, 274.

[10] For a detailed account of the high death rate among foundlings, of whom more than half died in the first years of life, and of the causes of this high mortality see L. Lallemand, *Histoire des enfants abandonnés et délaissés* (Paris, 1885), especially pp. 208 ff., 246-47; also C. Block, *L'assistance & l'état en France à la veille de la révolution* (Paris, 1908), pp. 98-120.

[11] Moheau, I, 182, 213, 219-20.

but 0.75 per cent had 12 or more. Figures on 5,283 families indicate no living children in 27.3 per cent; 1-2, 46.7 per cent; 3-4, 19.6 per cent; 5 or more, 6.4 per cent.[12] Even among the royal, noble, and upper bourgeois families infant and child mortality was high, but one-half or less of those born completing the twentieth year. For centuries the attitude toward death, particularly toward the death of children, was that of oriental (or Christian) resignation. Parents in all classes, even in the royal and upper bourgeois groups, taking it for granted that death would early strike down a large proportion of the newly-born, gave little or no attention, prior to the eighteenth century, to child-birth and -death.[13]

The eighteenth century witnessed in France, as in England, a growing interest in midwifery, maternal- and child-care, and public health—an interest that bore fruit in the latter part of the century. Child-mortality apparently fell greatly in France, as in England.[14] Of 1,000 newly-born about 1750 in France, but 540 and 490 survived to the fifth and tenth years; about 1780, 583 and 551; in 1817-32, 707 and 668; in 1861-63, 694 and 668; in 1877-81, about 730 and 706.[15] Male expectation of life at birth and at the age of 10 rose from 23.37 and 44.12 years in 1795 to 38.33 and 47 in 1817-32.[16] Not until the latter part of the nineteenth century did a correspondingly significant decline in infant and child mortality again begin.

The data which we have presented, coupled with materials presented in Chapter I, indicate that population grew in the eighteenth century; they do not reveal a marked decline in natality. In the nineteenth century, as will be seen, voluntary infertility constituted the chief immediate check to population growth. It is pertinent to inquire, therefore, whether or not the nonstatistical evidence reveals voluntary infertility in pre-nineteenth century France, and whether or not such infertility increased. For, despite the testimony of certain writers to the contrary, it is unlikely on a priori grounds that voluntary infertility is the fully developed fruit of the Revolutionary and Empire periods.

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[12] *Ibid.*, pp. 131-34. Messance's data suggest slightly lower mortality. Cf. the above figures with those given for years 1891-1926, below.

[13] Mathorez, I, 22-25, 29-31, 41-51; Block, *op. cit.*, pp. 246-59. On the attitude of resignation see also Aynard, *op. cit.*, p. 224; Usher, *Grain Trade*, p. 220.

[14] On the eighteenth-century improvements, especially in England, see R. H. Shryock, *The Development of Modern Medicine* (Philadelphia, 1936), pp. 88-106. See also note 55, below.

[15] Levasseur, II, 295. The eighteenth-century estimates, given by contemporary authors of life tables, are less accurate than the nineteenth-century figures.

[16] L. I. Dublin and A. J. Lotka, *Length of Life* (New York, 1936), p. 365.

There is, on the whole, little evidence that, prior to the late seventeenth century, the development of a town and money economy, the rise of a middle class, and the occasional improvements in living conditions and scales gave birth in the nobility or in the bourgeoisie to a widespread desire to control fertility, or to practices suited to achieve this end. Students of the period present little evidence of family restriction.[17] Genealogical records do not reveal a decline in family size. One finds at most evidence that some well-to-do and other mothers were not suckling their children, but placing them with mercenary wet nurses—a practice often motivated by the same personal interests which induce family limitation.[18] Apparently, however, the practice was not associated with family limitation before the close of the seventeenth century, even mothers who employed wet nurses continuing to procreate.[19] Even in the seventeenth century, when Madame de Sévigné was warning her daughter not to become pregnant,[20] the bourgeois families remained as large as ever,[21] and, the ladies of the court not yet fearing that pregnancy would mar their figures, "the families of the nobility were as prolific as the commoners."[22]

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[17] Gonnard (*Histoire*, p. 126) and V. L. J. Brants (*L'économie politique au moyen âge*, Louvain, 1895, p. 236) have noted condemnation of voluntary sterility as early as the fifteenth century. Schöne (pp. 127, 131) infers from the anti-infanticide edict of 1556 that there was some recourse to abortion and infanticide in the sixteenth century. Block (*op. cit.*, p. 100) seems to share this opinion. Des Cilleuls (*La population*, pp. 83, 91) believes that by the sixteenth century neopaganism and this-worldliness were influencing conduct, causing recourse to infanticide (*not* to abortion), and producing a decline in intramarital fertility. M. T. Nisot states that there was some family limitation in the sixteenth century (*La question eugénique*, Brussels, 1927, p. 401). According to R. de Maulde La Clavière (*Les femmes de la renaissance*, Paris, 1898, pp. 98-99), the mission of maternity was considered unimportant by members of the upper classes during the period of the Renaissance.

[18] The failure of mothers to suckle their own children, an important cause of infant mortality in France in the eighteenth and nineteenth centuries, gave rise at least as early as 1350 (see F. Ledé, *J.S.S.P.*, Nov., 1922, pp. 261-62; also La Clavière, *op. cit.*, pp. 102-03) to the "nursing industry" whereunder mercenary wet nurses suckled, weaned, and reared very young children. Bezard (*op. cit.*, p. 213) believes documentary evidence to indicate that children were being sent into the country around Paris to be nursed in the sixteenth century. As early as 1198 the Ordre Hospitalier began to establish hospitals for foundlings and to employ mercenary wet nurses to suckle the foundlings (Lallemand, *op. cit.*, pp. 124-29). Later, in Paris and other

Personal interests, the desire to preserve or elevate socio-

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cities, foundling hospitals employed agents *(meneurs)*, as did private families, to place the nursling children with mercenary wet nurses who, in theory, were subject to rules and to the surveillance of *curés* (Block, *op. cit.*, pp. 106-12). Lallemand (*Histoire de la charité*, Paris, 1912, IV, Part 2, p. 399) believes that private families were resorting to mercenary wet nurses even before 1350 and cites a royal ordinance of 1350 pertaining thereto. Long before Rousseau's day French writers of voyageur works were condemning the French mothers for failing to suckle their children. Thus Marc Lescarbot (*Histoire de la Nouvelle France*, Paris, 1609) condemned mothers who, desiring "that their breasts serve to allure," failed to nurse their children. He noted too that in France children were sometimes considered "a burden to fathers and mothers" who disdained them and sometimes procured their death. For similar views on maternal failure to suckle children see Claude d'Abbéville, *Histoire de la mission en l'isle de Maroquan* (Paris, 1614); Paris (1637) edition of Campanella's *City of the Sun;* A. Biet, *Voyage de la France equinoxiale* (1664); G. Foigny, *La terre australe connue* (Paris, 1676); Denis V. d'Alais, *L'histoire des Severambes* (Paris, 1677), a work later read by Rousseau. The relevant citations from the named works are given in G. Atkinson: *The Extraordinary Voyage in French Literature Before 1700* (New York, 1920), pp. 53, 122; *Les rélations des voyages du XVII^e siècle et l'évolution des idées* (Paris, n.d.), pp. 79-81, 105, 168.

[19] Mathorez, I, 4-9, 22; Aynard, pp. 268-70; W. H. Scheifley, *Brieux and Contemporary French Society* (New York, 1917), pp. 366-67.

[20] See letters written in 1671-72 in *Lettres* (Paris, 1862), II, 389-90; III, 17, 41-42, 128, 147.

[21] Aynard, *op. cit.*, pp. 269-70. G. de Lapouge (*Eugenics Review*, XIX, 1927, 198) has studied in detail a number of bourgeois trader families in a provincial town prior to the French Revolution. Members married persons of similar status. Women married at 20-25 years or a little later, following completion of a commercial education, and bore children regularly every fifteen months. The marriage rate was low, however, and high mortality cut down the families despite the fact that they were above the poverty line. Of the thirty families living at the time of Louis XIV, only six survived to the nineteenth century. "It is most probable that life took the same course in other cities."

[22] Mathorez, I, 7-9; see also P. de Vaissière, *Gentilshommes campagnards de l'ancienne France* (Paris, 1904), pp. 232-35, 259, 360-65, 381. Des Cilleuls, however, indicates that both the bourgeoisie and the nobility had some recourse to abortion in the seventeenth century (*op. cit.*, pp. 83-84).

economic rank, and economic ambition in its various guises had begun to induce deferment of marriage and limitation of family size to some extent by the close of the seventeenth century; these factors apparently became more operative in the course of the eighteenth century. Certain of forces conducing to family limitation played upon all classes of the population; others only upon certain classes. Within the court circles such personal factors as the concern of noble women for their health and figures seem to have become operative.[23] The conspicuous consumption and loose mode of living among the urban nobility and royalty apparently influenced the behavior of those bourgeoisie who aspired to, or consorted with, the nobility.[24] The growth and spread of urban life must have intensified the corruption of the *moeurs* on the one hand, and the desire for goods and luxuries on the other.[25] The gradual substitution of this-worldly rationalism for other-worldly supernaturalism must have been accompanied by some dissolution of personal moral objections to family limitation.[26]

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[23] Mathorez, I, 9-10. Abortionists functioned in the cities in and before the eighteenth century (*ibid.*, p. 31).

[24] Fontaine and Molière give this impression. See also Bertheau, *op. cit.*, p. 320; J. B. Perkins, *France under Louis XV*, I, 18-19, 29-32, 34, 459; II, 382-83, 393; Baron d'Holbach, *Système sociale* (London, 1774), III, 89.

[25] Many of the writers mentioned below expressed this opinion. Luxurious consumption, though not common in rural or urban communities (Levasseur, I, 232, 236-43; A. Neymarck, *J.R.S.S.*, LII, 1889, 329-30), was condemned by various eighteenth-century writers (Bertheau, pp. 312-32) as a depopulator, some of whom were content merely to name *luxe* as a main check to population growth. E.g., see C. J. Herbert, *Essai sur la police générale des grains* (Berlin, 1755), pp. 322-23, and p. 344, where he refers to "*une désordre contraire à l'augmentation des familles*"; D'Amilaville, "Population," in *Encyclopédie* (Neufchâtel, 1765), XIII, 94, 102; Abbé Raynal, *A Philosophical History of the Settlement and Trade of the Europeans in the East and West Indies* (1770), (London, 1798), VI, 409-10. See also those writers who observed that when propagation threatened a given, or a rising, scale of living, men tended to defer marriage, but said nothing of family limitation as such. E.g.: the Physiocrats; the agrarians; R. Cantillon (who wrote about 1735), *Essai sur la nature du commerce en général* (Henry Higgs ed., London, 1931), pp. 69, 71, 77-81; E. B. Condillac, *Le commerce et le gouvernement* (1776), in *Oeuvres* (Paris, 1798), p. 259; A. R. Turgot, *Oeuvres*, ed. E. Daire (Paris, 1844), II, 791. See also C. Montesquieu, *Lettres persanes* (1721), Letter 123; N. Plumart de Danguel, *Remarques sur les avantages et les désavantages de la France et de la Gr. Bretagne* (Leyden, 1754), p. 19. A number of writers (e.g., De Laffemas, Melon, Forbonnais, Butel-Dumont, Saint-Lambert, and others) argued, however, that luxury was favorable to population growth in that it made employment possible.

All classes of society apparently were influenced by the growing use of money, credit instruments, and rentes. Class stratification was weakened; social mobility and the desire to rise were intensified.[27] The "propensity for a manifestation of dominance and pecuniary decency,"[28] evident in the tendencies toward emulative expenditure noted above, was strengthened. For under a money economy peasants and lower bourgeoisie tended to develop habits of thrift and calculation, since they could accumulate property freely.[29] Or they could amass a small fortune and, by thrift and caution, live on the derivative income. In fact, according to Aynard, by 1760 many bourgeois, interested only in living as rentiers on a fixed income that was ever threatened by rising prices, were fully observing the counsel, given openly and publicly for perhaps the first time in 1706,[30] that it is the mark of prudence to limit family size and thereby avoid the burdens and subdivision of wealth occasioned by excessive propagation.[31]

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[26] On this and certain other of the changes mentioned see Aynard, *op. cit.*, pp. 233, 280-85, 291-93; Karl Toth, *Woman and Rococo in France* (London, 1931), pp. 135, 307, 330-32; H. Clément, *La dépopulation en France* (Paris, 1910), p. 315; Mathorez, I, 9-10.

[27] See Aynard, *op. cit.*, p. 233. Many, wrote the Chancellor d'Aguesseau in 1698, are occupied "with that which they wish to be and never with that which they are." See Levasseur, I, 231. On the new ascensional tendency see Jean du Pradel, *Traité contre de luxe des hommes et des femmes* (Paris, 1705), p. 5; M. Senac de Meilhan, *Du gouvernement, des mœurs et des conditions en France avant la révolution* (1795), (Paris, 1814), pp. 33-41. See also G. Simmel's account of the societally atomizing effect of money in *Philosophie des Geldes* (Leipzig, 1900), pp. 357-86, 480-501.

[28] See T. Veblen, *The Theory of the Leisure Class* (Vanguard ed.), p. 91.

[29] R. von Ungern-Sternberg (pp. 161-64) implies that the French peasants, early freed of feudal fetters, learned to handle money and became money-minded before peasants in other lands. To some extent this was true also of the petty bourgeoisie. Wherefore it was not strange that within three decades of abolition (through the Revolution) of remaining political and social checks to economic ascent, bourgeois virtues were flowering and "*enrichissez-vous*" had become a watchword.

[30] In G. T. Valentin's *Le Franc-bourgeois* (1706) in Act III, Scene I, where Pandolphe says that it is better not to make infants one cannot support, better to have but one child and avoid subdividing property (cited by Aynard, *op. cit.*, p. 291).

[31] Aynard, *op. cit.*, pp. 399-400, 431.

Having indicated certain of the changes in familial life and in the attitudes toward familial life under way after 1700, we shall indicate, by listing the opinions of many writers who enumerated motives to family limitation, that family limitation was being resorted to long before the French Revolution. Of the many writers who considered the widespread misery[32] an ultimate check to population growth in 1650-1780, only Boisguilbert implied that this misery induced men not only to avoid or defer marriage, but also to resort to preventive checks. "Extreme poverty causes the diminution of families to be regarded as a blessing and . . . this situation carries with it the means of procuring [this diminution]."[33]

In 1721 Montesquieu, familiar with the widespread poverty and literature of complaint, said that men do not marry, or, if they marry, limit the number of their children, when faced with the prospect of seeing their children sink in status. In 1748 he observed that a multiplicity of personal human interests "obstruct propagation a thousand different ways."[34] Plumart de Danguel said in 1754 that desire for luxury and position had caused a decline in the frequency of, and fertility in, marriage.[35] De Jaucourt, having stated that the number of abortions "is extremely considerable," said that love of luxury and pleasure, fear of family burdens, etc., had caused men "to invent a thousand means to prevent conception," recourse to which was spreading from the upper to the lower classes.[36] Rousseau referred in 1755 to "abortions" and infanticide, to "shameful methods . . . to prevent birth . . . and cheat nature"; in 1762 to the voluntary use of means to avoid motherhood, a use that (he predicted) would eventually depopulate Europe.[37] Goudar stated that love of luxury and fear of family burdens caused men to defer or avoid marriage and women to remain celibate "*dans le sein même du mariage.*"[38] Both the Abbé P. Nonnotte[39] and the Marquis de Montcalm observed that many families were content with but one heir.[40] Forbonnais said that one needed but to consult the "clergy on the diminution of families" to learn the real cause.[41] Mirabeau observed that women were disinclined for various reasons to bear children.[42] H. de Goyon de la Plombaine said that the "great" were rarely producing more than one or two children, and that the "people" were aping the great.[43] In 1764 the subdelegate of Nerac observed that the bourgeoisie were limiting the number of children per marriage to one or two.[44] "A prudence [in marriage], unknown to our ancestors, limits the number of children, according as the father or mother desire it," M. Corrovan wrote in 1766.[45] Conspicuous display and other motives had caused men to limit the number of marriages and fertility in marriage, said Abbé Jaubert.[46] F. de Villeneuve said that many women conceived only in spite of themselves, employing everything to reduce "fecundity" and attenuate its results; that some menages plan "to have no children, or but one."[47] Comte L. G. Dubuat-Nancey stated that men and women, especially in the nobility and in cities, fearing the burdens of children, plotted "against nature," usually after having borne one or two children.[48] S. N. H. Linguet said that the married did not scruple to frustrate nature.[49] Moheau, observing that both nobles and commoners, animated by "reflection and the spirit of calculation," were limiting the number of children in marriage, predicted that depopulation would result unless "this secret and terrible cause" of depopulation were fettered.[50] J. Necker was undoubtedly aware of this situation noted by Moheau, for he described as the most dangerous checks to population "fear of being a father" and "corruption of customs in the countryside."[51] Messance, who, in his first work, described fertility as independent of the human will, wrote in 1788 that men, desiring to limit their children to one or two, destroyed "in the very act of sowing."[52] Similar opinions were expressed in the second half of the eighteenth century by the clergy and advocates, resident in several parts of France.[53] Condorcet, writing shortly after the Revolution, said that men would limit propagation in the future, should further population growth threaten human happiness.[54]

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[32] Vauban (*Projet d'une dixme royale*, 1708 ed., Preface, also pp. 3-4, 96-97, 126, 130, 162-63) summarized the state of the people about 1700 as follows: reduced to mendicancy, one-tenth; on verge of mendicancy, half; badly off and in debt, three-tenths. Only part of the remaining tenth could afford alms. Not over 10,000 families (i.e., about one four-hundredth of the population) were well off. In 1765, according to the Abbé Beaudeau, one-sixth of the population were poor. About 1790, according to the findings of the Comité de Mendicité, 5-10 per cent of the population were poverty stricken. See Block, *op. cit.*, pp. 5-6. By 1790 the "feeling of state obligation toward the employed and the needy in general" was very widespread. See S. T. McCloy, *South Atlantic Quarterly*, XXXV (1936), 449; also Lallemand, *La révolution et les pauvres* (Paris, 1898), pp. 37-38, 389-93.

[33] In *Traité des grains*, cited by H. Roberts, *Boisguilbert*, p. 368. Though F. Fénelon shared this opinion he refers to *luxe* as the chief depopulator in his *Adventures of Telemachus* (1699). See O. W. Wright edition (Boston, 1888), p. 513. The prevailing misery seems to have caused an increase in child exposure and infanticide in the late seventeenth and early eighteenth centuries. See Mathorez, I, 30-31; Block, *op. cit.*, p. 23.

[34] *Persian Letters* (1721), Letter 123; *The Spirit of Laws* (1748), (Glasgow, 1793), I, 226-27; II, 95, 102.

[35] *Op. cit.*, pp. 18-19, 30, 46-47.

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[36] "Fausse Couche," *Encyclopédie* (1756), VI, 452-53; reprinted in *Encyclopédie méthodique* (Paris), CLXVII (1793), 268-70. See also *ibid.*, CLXIX (1808), 527; CXLV (1789), 598.

[37] *Émile* (1762) in *Oeuvres* (Paris, 1839), III, 18; "Discours sur l'inégalité" (1755) in C. A. Vaughan, *The Political Writings of Jean Jacques Rousseau* (Cambridge, 1915), II, 204-06.

[38] *Op. cit.* (1756), I, 261, 268-71; see a similar statement in Aynard, *op. cit.*, p. 400.

[39] *Erreurs de Voltaire* (Paris, 1776), chap. i.

[40] Bertillon (*Dépopulation*, p. 120) cites General Montcalm's statement made in 1756.

[41] *Recherches et considérations sur les finances de France* (Liege, 1758), II, 172; also *Éléments du commerce* (Leyden, 1754), II, 240-42, on luxury and the decline in frequency of marriage.

[42] *L'ami des hommes* (Amsterdam, 1757), pp. 38, 306, 462; (Rouxel ed., Paris, 1885), p. 180.

[43] *L'homme en société* (Amsterdam, 1763), pp. 215-16.

[44] Cited by Levasseur, I, 234-35; Des Cilleuls, *op. cit.*, p. 84.

[45] *Essays on the Spirit of Legislation in the Encouragement of Agriculture, Population, Manufactures, and Commerce* [Paris, 1766], (Newark, 1799), p. 434. See also the somewhat similar views of J. Bertrand and B. Carrard, *ibid.*, pp. 44-46, 279, 286.

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[46] *Des causes de la dépopulation et des moyens d'y remédier* (London, 1767), pp. 17, 38-39, 49-50, 173-74.

[47] *Mémoire sur la population dans lequel on indique le moyen de la rétablir, & de se procurer un corps militaire toujours subsistant & peuplant* (London, 1768), p. 8, note.

[48] *Éléments de la politique ou recherche des vrais principes de l'économie sociale* (London, 1773), I, 145, 153, 215-16; II, 65, 341-42, 355-56, 361, 364; IV, 48. Dubuat-Nancey refers to a "great disorder" and says he does not mean the "sin of Onan" (*ibid.*, II, 341-42).

[49] *Théorie des lois civiles* (London, 1774), II, 18, also 15-17, 20.

[50] *Recherches*, II, 99-102. The clergy and others in a position to know were aware that pleasure-loving women "are not the only ones who regard propagation of the species as a dupery of olden times; already these deadly secrets, unknown to any animal but man, these secrets have penetrated into the countryside; one deceives nature even in villages" (*ibid.*, II, 102). See A. L. von Schlözer, *Briefwechsel* (Göttingen, 1780), IV, 136, for a similar statement, based perhaps on Moheau.

[51] *De l'administration des finances de la France* (Paris, 1785), I, 203.

[52] *Nouvelles recherches sur la population de la France* (Paris, 1788), p. 27.

The testimony of the eighteenth-century writers[55] not only indicates that fertility was being limited within the marital state; it suggests also that the principal cause of the decline in natality in nineteenth-century France—limitation of family size by the married—represents but an aggravation of forces at work before 1789, intensified perhaps by the social turmoil and cracking up of custom occasioned by the Revolution and the wars of the Revolution and the First Empire. The statistical data which are presented for the post-1800 period will indicate that in the nineteenth century French natality and fertility fell far below pre-1800 levels and at a more rapid rate than in other lands, with the result that French natural increase soon fell below that of other European lands.

In Table IV are given birth, death, and natural increase rates for France and three representative European countries. The data support five conclusions. First, assuming the data for 1771-85 and 1801-20 are at all comparable, French natality fell from about 38 prior to 1789 to slightly over 32 in 1801-10, or about one-seventh—a proportion somewhat more than the decline in the absolute number of births.[56] During the same period Finnish natality declined slightly over 7 per cent to a level below which it did not fall permanently until after 1875; Swedish natality declined only to recover after 1810.[57] Second, natality, in 1801-40, was on a lower average level in France

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[53] See Des Cilleuls, *op. cit.*, pp. 84-94, citations from national and provincial archives.

[54] *Outlines of an Historical View of the Progress of the Human Mind* (London, 1795), pp. 345-47.

[55] Many of these writers (e.g., Quesnay, Buffon, Diderot, Mirabeau, Goudar, Goyon, Carrard, Rousseau, Jaubert, Villeneuve, Dubuat-Nancey, Moheau) advocated breastfeeding on the part of mothers and condemned mercenary wet-nursing, which some considered a concomitant of the desire to limit family size. In the preceding century Guy Patin, dean of the medical faculty of the University of Paris, condemned the use of pap and advocated breastfeeding. See F. R. Packard, *Guy Patin and the Medical Profession in Paris in the XVIIth Century* (New York, 1925), pp. 158-60. Deparcieux (*Essai sur les probabilités de la durée de la vie humaine*, Paris, 1746, p. 70), also a critic of mercenary wet-nursing, believed the practice to be a cause of relatively more mortality among the lower classes who could not afford good nurses and good conditions than among the upper classes who saw their children frequently. The efforts of these various writers inspired doctors and moralists to advocate improvement in the feeding and care of children. Eventually improvement resulted, and infant and child mortality declined. See A. de Luppé, *Les jeunes filles dans l'aristocratie et la bourgeoisie à la fin du XVIII^e siècle* (Paris, 1924), pp. 23-38. The practice of mercenary nursing continued into the nineteenth century, however (see Chapter X).

TABLE IV. BIRTHS, DEATHS, AND NATURAL INCREASE IN FRANCE, ENGLAND AND WALES, GERMANY, AND SWEDEN, 1801-1936*

Years	Births per 1,000†				Deaths per 1,000†				Natural Increase per 1,000†			
	F.	E.&W.	G.	S.	F.	E.&W.	G.	S.	F.	E.&W.	G.	S.
1801–10.....	‡32.4	§33.8	....	30.9	‡28.2	§20.0	....	27.9	4.2	§13.8	.....	3.0
1811–20.....	31.8	§33.4	¶**42.5	33.4	26.1	§20.3	¶**27.4	25.8	5.7	§13.1	15.1	7.6
1821–30.....	31.0	§32.4	**40.0	34.6	25.2	§21.7	**26.7	23.6	5.8	10.7	13.3	11.0
1831–40.....	29.0	‖31.3	37.9	31.5	24.8	‖22.4	**28.8	22.8	4.2	8.9	11.1	8.7
1841–50.....	27.4	32.6	36.1	31.1	23.3	22.4	26.8	20.6	4.1	10.2	9.3	10.5
1851–60.....	26.3	34.1	35.3	32.8	23.9	22.2	26.4	21.7	2.4	11.9	8.9	11.1
1861–70.....	26.3	35.2	37.2	31.4	23.6	22.5	26.9	20.2	2.7	12.7	10.3	11.2
1871–80.....	25.4	35.4	39.1	30.5	23.7	21.4	27.2	18.3	1.7	14.0	11.9	12.2
1881–90.....	23.9	32.5	36.8	29.1	22.1	19.1	25.1	16.9	1.8	13.4	11.7	12.2
1890–1900...	22.2	29.9	36.1	27.1	21.5	18.2	22.2	16.4	0.7	11.7	13.9	10.7
1901–10.....	20.6	27.2	33.0	25.8	19.4	15.4	18.7	14.9	1.2	11.8	14.3	10.9
1911–13.....	18.8	24.1	28.0	23.5	18.1	13.9	16.0	13.8	0.7	10.2	12.0	9.7
1914–19.....	12.4	20.1	20.8	21.0	19.0	15.0	15.0	14.6	—6.6	5.1	5.8	6.4
1920........	21.4	25.5	25.9	23.5	17.2	12.4	15.1	13.3	4.2	13.1	10.8	10.2
1921–25.....	19.4	19.9	22.1	19.1	17.2	12.2	13.3	12.1	2.2	7.7	8.8	7.0
1926–30.....	18.2	16.7	18.3	16.0	16.8	12.1	11.8	12.2	1.4	4.6	6.5	3.8
1931........	17.4	15.6	16.0	14.8	16.3	12.3	11.2	12.5	1.1	3.3	4.8	2.3
1932........	17.3	15.3	15.1	14.5	15.8	12.0	10.8	11.6	1.5	3.3	4.3	2.9
1933........	16.2	14.4	14.7	13.7	15.8	12.3	11.2	11.2	0.4	2.1	3.5	2.5
1934........	16.1	14.8	18.0	13.7	15.1	11.8	10.9	11.2	1.0	3.0	7.1	2.5
1935........	15.2	14.7	18.9	13.8	15.7	11.7	11.8	11.7	—0.5	3.0	7.1	2.1
1936........	15.0	14.8	19.0	14.2	15.3	12.1	11.8	12.0	—0.3	2.8	7.2	2.2

*Rates from *A.S.*, LI (1935), 258* ff.; *Population Index* (Oct., 1937).

†F. = France; E. & W. =England and Wales; G. = Prussia prior to 1841, Germany after 1840; S. = Sweden.

‡Levasseur (11, 6-7) gives birth and death rates of 33.2, 30.2 for France in 1800-05; rates for 1806-10 are 31.7 and 26.3.

§Estimate by Griffith, *op. cit.*, pp. 28, 36, for years 1806-16, 1816-26, 1826-36.

‖1836-40.

¶1816-20.

**Rate for Prussia.

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[56] Levasseur gives rates of 38 and 32.2 for about 1785 and 1801-10 (II, 15). The annual absolute number of births, slightly over one million about 1780 (*ibid.*, I, 272), fell to 912,000 in 1801-05, then rose to 994,000 in 1814, a figure not exceeded until 1859. See Chapter I for natural increase totals.

[57] See *Proceedings*, VII, *loc. cit.*, for early rates; also R. R. Kuczynski, *The Balance of Births and Deaths*, I, 6, 94. Declines in the birth rates of Finland, Belgium, and Scandinavia prior to 1850 were sharper than those observed in Northern and Western Europe in 1871-85. See *ibid.*, pp. 7-9.

than in England, Prussia, or Sweden.[58] Third, although French natality was lower in 1841-50 than that in the other three countries named, it declined 31 per cent by 1911-13, whereas the natality of the other three countries declined only about one-fourth. English and German natality did not begin definitely to decline until after 1871-80.[59] The absolute number of births per year in France reached a maximum of 1,004,934 in 1866-70, declining steadily thereafter; a maximum was reached in England and Wales in 1901-05, Finland in 1906-10, Germany in 1906-10, Sweden in 1911-14. Fourth, mortality has remained on a higher level in France than in England and Sweden and, since 1900, Germany. About 1930-32, French crude mortality exceeded that in all countries in Northern and Western Europe and that of a number of countries in Southern and Eastern Europe. Crude mortality fell only seven-tenths as much in France as in Northern and Western Europe between 1841-45 and 1931-33. (The rates in Northern and Western Europe were 22.5 in 1841-45, 16.6 in 1911-14, 12.6 in 1931-33; the corresponding French rates were 22.8, 20.4, 15.9.[60]) Fifth, as a consequence of these trends in mortality and natality, the French rate of natural increase remained below that of the other countries listed and of Europe in general. The annual number of deaths exceeded that of births twenty times (1854-55, 1870-

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[58] The birth rates for France and Northern and Western Europe were respectively 28.1 and 31.9 in 1841-45; 25.3 and 32.8 in 1871-80; 18.6 and 24.2 in 1911-14; 18.8 and 19.2 in 1926. In the eighteen-seventies French women bore on an average only 75 to 80 per cent as many children as did women in Northern and Western Europe. See Kuczynski, *Balance*, pp. 3, 6-9.

[59] J. Sanders found that between 1850 and 1927, when the decline in European natality ranged from 50 per cent in Sweden to 22 per cent in North Ireland and 30 in France, the decline was regular in France, Scandinavia, North Ireland, and Mecklenburg. In England and Wales, Scotland, and Netherlands the birth rate rose above the 1850-54 level, not declining until after 1879. In Hannover, Schleswig-Holstein, Westphalia, Württemberg, Bavaria, Baden, and Switzerland the rate did not decline markedly until the present century. See *Comparative Birth-Rate Movements among European Nations* (Cold Spring Harbor, 1929), pp. 4-8. American natality, as measured by the ratio of children to women of childbearing age, although on a higher level than that of France, followed a similar steady downward trend. See W. F. Willcox, *Journal of American Statistical Association*, XII (1910-12), 490-99.

[60] On crude rates see Kuczynski, *Measurement*, pp. 160-63; P. Depoid, *J.S.S.P.* (Jan., 1937), p. 11.

71, 1890-92, 1895, 1900, 1907, 1911, 1914-19, 1929, 1935-36) in the period 1801-1936, the deficits being traceable to increases in the death rate and decreases in natality caused by war, pestilence, dearth, heavier incidence of disease,[61] and, recently, unfavorable changes in age composition.

Natality declined less absolutely and relatively in France than in any one of 12 representative European lands in 1913-26, 1913-34, and in the post-war pre-depression period.[62] In 1913 each of the 12 had a higher birth rate than France; in 1926, 9; in 1930, 6; in 1934, 7; in 1936, 8. The improvement in France's relative position is ascribable to the fact that natality fell more rapidly in the countries which already in 1913 had low birth rates. Since 1930, however, natality again has begun to fall relatively more rapidly in France than in many of the 12 countries named. In 1930-34 only 6 of these 12 countries experienced a greater relative decline than France; in 1934-36 none experienced a greater relative decline and but two experienced a greater absolute decline.[63]

Standardized and corrected rates indicate, as have the crude rates already presented, that while French natality did improve relative to that of foreign countries in the period 1910-30, French mortality did not improve in like manner. In 1910-12 French standardized natality was below that in other European countries; about 1920-23 only the Esthonian rate was lower; about 1925-27 the German, English, Esthonian, and Swedish rates were lower;[64] about 1930-32 Germany, Austria, Sweden, England, Switzerland, Esthonia, Norway, Latvia, and Denmark had lower rates than France.[65] The French gross reproduction rate declined relatively less than that in other European lands in the present century.[66] In 1930-32 standardized mortality in France remained above that in Northern and Western Europe and not much below that in Southern and Eastern Europe, having declined less in France in 1910-32 than that in most European countries. About 1920-23 the true French death rate was exceeded in Europe only by those in South and East European lands; about 1850 by those in Germany, Holland, Switzerland, and South and East European lands.[67]

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[61] Epidemics served also to reduce natality, as Turquan observed (*J.R.S.S.*, LIV, 1891, 692-96). Recently F. and H. Hotelling have shown that epidemics increased the involuntary abortion rate in France and England and thus reduced natality as of seven to nine months later. Moreover, as abortion increased the risk of pregnancy, the birth rate rose above normal subsequently. See *Journal of the American Statistical Association*, XXVI (1931), 135-49.

[62] These 12 countries, arranged in the same order as their crude birth rates in 1913, are: Hungary, Italy, Spain, Holland, Germany, Denmark, Norway, England and Wales, Austria, Sweden, Switzerland, and Belgium.

[63] The percentage decline in French natality was 1.1 in 1913-26; 5.3 in 1913-30; 21.1 in 1913-36; 20.2 in 1926-36; 16.7 in 1930-36; 6.8 in 1934-36. In the corresponding period the arithmetic average of the birth rates in the six countries with the highest rates in 1913 fell 16.7, 21.1, 30.2, 16.2, 11.5, and 2.6 per cent; that of the six countries with the lowest rates in 1913 fell 22.1, 20.0, 37.8, 20.2, 13.6, and 1.6. We have used the Spanish rate for 1935 in making these calculations. For data on resumption of decline see Chapter X.

Unfavorable age and marital composition is responsible neither for the long-continued decline in French natality, nor for the fact that French natality was, until recently, below that in other European lands. The age and marital composition of the French population has compared favorably with that in other lands;[68] it has (until recently) become more favorable to natality. The percentage of the French population falling within the age group 21-40 rose from around 28.4-29 per cent in 1778-90 to 29.7 in 1876 and about 31 in 1931.[69] Women of childbearing age formed 26.18 per cent of the French population in 1851; 25.65 in 1891; 25.87 in 1911; 27.59 in 1921; 27.25 in 1926; 26.48 in 1931. The corresponding percentages in other European lands have not been more favorable to natality.[70] The proportion of the French population in the married state, estimated at 37.5 to 44 in 1778-90, rose from 35.9 in 1806 to 37.2 in 1841, 40.5 in 1861, 40 in 1891, 44.5 in 1926, and 46.2 in 1931.[71] The proportion of the French population consisting of married females rose steadily from about 18 in 1806[72] to 19.4 in 1851, 20.4 in 1901, 22.8 in 1926, and 23.1 in 1931. The proportion of the population consisting of married females aged 15 to 49 rose intermittently from 13.4 in 1851 to 15.95 in 1926, and 16.18 in 1931. The relative number of women aged 15-49 who were living in the married state has increased, rising from 52.3 per cent in 1851 to 60 in 1911 and 61.1 in 1931. The marriage rate in France has remained comparatively stable at a level not below that in other European lands.[73] The average age at marriage in France fell in the second half of the century, after having risen in the first half.[74]

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[64] See R. Husson, *Bulletin*, S.G. (Jan.-March, 1931), pp. 245-301.

[65] P. Depoid, *J.S.S.P.* (Jan., 1937), p. 7.

[66] Kuczynski, *Measurement*, pp. 122-24.

[67] See *ibid.*, pp. 184-86; L. I. Dublin and A. J. Lotka, *Length of Life* (New York, 1936), pp. 43-48; Huber, *op. cit.*, pp. 50, 697; J. Bourdon, *R.d.e.p.*, XLII (1928), 388-92; P. Depoid, *J.S.S.P.* (Jan., 1937), p. 11. In 1931 specific death rates in France ranked approximately twelfth among 32 countries in five-year age groups under 10; eighteenth to thirtieth in higher age groups (*ibid.*, p. 12); the situation was similar in 1900-10 (Huber, *op. cit.*, pp. 52-53, 714-18). Typhoid and tuberculosis mortality remain appreciably higher in France than in many other countries (cf. *A.S.;* also M. Moine, *J.S.S.P.*, LXXVII, 1936, 405-06). A. Roubakine states that mortality remains so high in France because the public health service is inadequately manned and because the economic and social factors conducive to morbidity and mortality have not been corrected. See *La grande réforme* (March, 1935), no paging; also Pierreville, cited in Chapter IV, note 5.

[68] For comparative data see Kuczynski, *Balance*, I, and *Measurement; A.S.*, LI, 248*-52*; J. A. Baines, *J.R.S.S.*, LXXII (1909), 685-713. See also F. W. t'Hooft (*Het Bevolkingevragstuk*, *waar wy heengan in West-Europa*, Amsterdam, 1929), who attributes the augmentation of Europe's population to the decline in mortality and describes the relatively stabilized population of France as normal for Western Europe.

[69] See Levasseur, I, 275, for data for earlier years.

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[70] See Kuczynski, *Balance*, I, 17-18, Appendix B; also *Measurement*, pp. 234 ff.

[71] Levasseur (I, 274-75, 335-36) gives data for 1778-1886.

[72] The 1801 percentage was about 17.6. In 1813, 170,000 men married prematurely to escape military service under Napoleon (Levasseur, III, 215). In 1814 legitimate births numbered 939,000 as compared with 842,000 and 893,000 in 1813 and 1815.

[73] Between 1811-20 and 1911-13 the number of persons marrying per 10,000 population usually ranged between 155 and 160; this rate rose markedly after the war, only to fall to 151 by 1933. Rates in the countries of Western Europe were not above this level, following the decline in the marriage rate in the first third of the nineteenth century. The frequency of marriage among unmarried persons of marriageable age in France, during the half century preceding the World War, compared favorably with the average for Western Europe. See Bertillon, *Dépopulation*, pp. 177-78; Von Ungern-Sternberg, *op. cit.*, p. 24; *A.S.*, XLIX (1933), 259*; Huber, *op. cit.*, pp. 41-43, 632-34. There was a greater tendency in France than in England for older persons to marry younger persons, for in France marriage was dominated more by pecuniary calculations and less by love. See L. Roquet, *J.d.e.*, 4th ser., XIII (1881), 227-33.

[74] A. Legoyt estimated that the average age at marriage for the two sexes had risen from about 27 in the late eighteenth century to between 30 and 31 in the 1850's (*J.d.e.*, 3d ser., VII, 1867, 217). P. Depoid reports the average age at marriage for males and females respectively as 28 and 24 about 1850; 28 and 23.67 in 1913; 26.5 and 23.2 in 1931. See *Bulletin*, S.G., XXIV (1935), 469. The average in France compared favorably with that in other countries in the nineteenth century (Bertillon, *Dépopulation*, pp. 178-79). See also note 101.

The decline in French natality and the lowness of natality in France relative to that in other lands are primarily ascribable, therefore, to the decline in the fertility of French married women. The extent of the decline in French intramarital natality is strikingly apparent in the fact that between 1851 and 1931 the annual absolute number of births fell 24.7 per cent, despite an increase of 32.1 per cent in the number of married women aged 15-49.[75] Between 1850-54 and 1925-27 births per 1,000 French women aged 15-45 fell by the same fraction as did crude natality, three-tenths, a decline less pronounced, however, than that in certain other countries.[76] Between 1805-07 and 1850-52 the number of legitimate live births per 1,000 married women fell steadily from about 167 to 129, a decline of 23 per cent compared with a decline of 15 per cent in crude natality;[77] it fell to 97 in 1900-02 and 71 in 1930-32, a decline of 46 per cent in 1851-1931, compared to a 35 per cent decline in crude natality. Between 1805-07 and 1930-32 the crude birth rate fell about 44 per cent; the number of legitimate births per 1,000 married women, about 57 per cent. Between 1850-52 and 1931 the number of legitimate births per 1,000 married women, aged 15 to 49, fell steadily from 182 to 104, a decline of 43 per cent, compared to a decline of 35 per cent in crude natality.[78]

[75] In the same time interval illegitimate births (4.8, 7.2, and 7.8 per cent of all births in 1801-05, 1851, and 1931) declined in annual number by 17.1 per cent.

[76] Births per 1,000 women aged 15-45 in the periods 1850-54, 1880-84, and 1925-27 were as follows in representative countries: France, 118.1, 115.8, 82.9; Sweden, 139.0, 132.5, 69.9; England and Wales, 143.4, 145.9, and 70.9; Italy, 166.3 in 1863-64, 169.0, 124.1; Westphalia, 144.2, 187.4, 91.6. See Sanders, *op. cit.*, pp. 33 ff.

[77] The rate in 1801 seems to have been about 178. Since the earlier data are inadequate, the early rates may be somewhat inaccurate. Moheau (I, 131-32) gives data for 8,000 married women in four places which suggest a rate of 218 in the middle of the eighteenth century.

[78] According to the *Statistique générale*, legitimate births per 1,000 married women, aged 15-45 years, were 179 in 1846-55, 172 in 1866-75, 150 in 1886-95, 115 in 1906-13, 120 in 1920-24, 104 in 1931. Live births per 1,000 women, aged 15-49 years, were 101 in 1846-55, 103 in 1866-75, 89 in 1886-95, 76 in 1906-13, 73 in 1920-24, 67 in 1931. See *Statistique du mouvement de la population* (1931), Part I, p. liii. The percentage declines between 1896-1900 and 1932 in legitimate births per 1,000 married women and in all births per all women by five-year age groups respectively have

While the fertility of both married women and all women (married and unmarried) of childbearing age has remained lower in France than in most other countries, French rates have declined relatively less since 1850 and particularly since 1900, chiefly because of the relatively greater decline in non-French intramarital fertility. The arithmetic average of the number of legitimate births per 1,000 married women aged 15-45 years in 10 countries (England, Scotland, Ireland, Belgium, Holland, Switzerland, Germany, Denmark, Norway, and Italy) fell from 303 to 164, or 46 per cent, between 1872-75 and 1930; in France, from 203 to 121, or 40 per cent.[79] In Table V we present analogous rates indicating a lesser decline in France than in countries other than Italy in the past sixty-five years.

TABLE V. GENERAL AND MARRIED FERTILITY IN FRANCE AND REPRESENTATIVE COUNTRIES, 1860-1930*

Country	Births per 1,000 Women, 15–49			Legitimate Births per 1,000 Married Women, 15–49		
	1860's	1930–32	Decrease in Per Cent	1860's	1930–32	Decrease in Per Cent
France	102	67	34	173	100	42
England	136	56	59	248	102	59
Belgium	127	68	46	278	106	62
Denmark	128	68	47	221	117	47
Italy	141	95	33	244	172	29
Germany	150	56	63	275	92	67
Sweden	123	56	54	244	104	57

*Figures from Levasseur, III, 185; Depoid, *J.S.S.P.* (Jan., 1937), p. 7. The years are not quite identical for each country. Prussian data are used to represent Germany in the 1860's.

The above results are confirmed by other comparisons. In 1930-32 only seven of 36 countries had a lower frequency of births per 1,000 women aged 15-49 than France.[80] Eighty years earlier only North Ireland had a lower rate.[81] In the

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been as follows: under 20, +5.8, +11.1; 20-24, −32.0, −3.0; 25-29, −27.4, −26.3; 30-34, −35.5, −32.6; 35-39, −42.1, −40.7; 40-44, −50.0, −48.6; 45-49, −71.4, −66.7; 15-49, −32.2, −23.3. Computed from *Notizaria Demografico*, IX (1936), 117.

[79] For rates see Levasseur, III, 189; *Notizaria Demografico*, VIII (1935), 320.

[80] M. Depoid, *J.S.S.P.* (Jan., 1937), p. 7.

[81] Sanders, *op. cit.*, pp. 31 ff.

middle 1890's no European country had a lower gross or net reproduction rate than France; around 1933 England, Sweden, Germany, and Austria had lower gross and net rates than France.[82] About 1881 the corrected birth rate[83] in 11 countries exceeded the French rate by 38-63 per cent; in 1901, by 23-78 per cent.[84] In 1912-13 legitimate births per 1,000 married women under 45 in 15 representative European lands exceeded the French rate by 39-103 per cent; in 1924, by 4-77 per cent.[85] By 1930 French marital fertility, though below that of 26 countries for which data are given, exceeded that of Germany and Austria.[86] Between 1908-13 and 1930-32 the arithmetic average of legitimate births per 1,000 married women 15-49 in the 13 European countries referred to above fell 45 per cent; the French rate fell only 12 per cent, the excess of the non-French average rate over the French rate declining from 58 to 16 per cent.[87] Between 1920 and 1930 the fertility of all women and of married women fell relatively more in most European countries than did that in France.[88]

French natality is low, relatively and absolutely, because French women begin to curb fertility at an earlier age than do women in other countries. In 1931 France ranked seventh among 28 countries in births per 1,000 women aged 15-19. Her rank fell as the higher age groups were approached: 20-24, tenth; 25-29, eighteenth; 30-34, twenty-fourth; 35-39, twenty-sixth; 40-44 and 45-49, twenty-eighth.[89] While France's relative position with respect to fertility by five-year age groups was somewhat similar about 1900, fertility was lower in France than in any other country for which data are available for all age groups above 20-24. The improvement in France's relative position in 1900-30 is due to the fact that fertility by five-year age groups has fallen relatively less in France than in other countries in the five groups 20-24 to 40-44.[90] Of 13 countries for which legitimate births per 1,000 married women classed into five-year age groups are available as of 1931, but one had a lower rate than France in age groups 15-19 and 25-29; in the other age groups, none.[91]

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[82] Kuczynski, *Measurement*, pp. 126-27, 212-14. Depoid gives gross and net rates for 28 countries as of around 1930, 18 of the former and 19 of the latter exceeding the corresponding French rate (*op. cit.*, pp. 7, 14).

[83] A. Newsholme, *The Declining Birth Rate* (New York, 1911), p. 21.

[84] The arithmetic average of the corrected rates for the 11 countries exceeded the French by 51 per cent in 1881; by 50, in 1901.

[85] See Huber, *op. cit.*, p. 676, also p. 47. The average of the rates in these countries exceeded the French by 77 per cent in 1912-13; by 33 in 1924.

[86] Depoid, *J.S.S.P.* (Jan., 1937), p. 7.

[87] Based on *ibid.*, p. 7, and Huber, *op. cit.*, p. 47.

[88] See comparative rates in *Notizaria Demografico*, VIII (1935), 320.

[89] Depoid, *op. cit.*, p. 9.

Both the absolute lowness of, and the decline in, fertility in the married state are reflected in the number of surviving children per family, which decreased from 2.2 in 1891, 1896, and 1901 to 2.19 in 1906, 2.14 in 1911, and 1.99 in 1926.[92] Between 1875 and 1906 there apparently was no marked diminution in the number of children per completed family.[93] The decline since 1926 in fertility within the married state and in natality has depressed the number of surviving children below the above levels.[94]

The decline in natality, fertility, and the size of the average family in France is the consequence, not of an increase in childlessness, but of the spread of the small family system.[95] Since 1891 the proportion of French families without living children has remained almost constant, at a level similar to that in other

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[90] For figures see Kuczynski, *Measurement*, p. 122.

[91] Depoid, *op. cit.*, p. 9. In 1892-1900, 20.35 per cent of legitimate births in France were to mothers aged 35 or more years; in roughly corresponding periods the corresponding percentage was 34.49 in Sweden; 28.36 in Denmark; 34.74 in Norway; 31.17 in Finland. See R. Duffield, *J.R.S.S.*, LXXI (1908), 8. In 1925-27 effective fertility for all women was at a peak at the age 24, declining one-half by the thirty-fifth year; effective fertility for married women was at a peak (if one excludes those aged under 20, many of whom presumably married because of pregnancy) at the age 23, declining 44 per cent by the age 32. See *A.S.*, XLIX (1933), 27. See note 101, below.

[92] *Statistiques des familles en 1906*, p. 18; *A.S.*, XLVII (1931), 14. The number of legitimate children per German family fell from 4.4 about 1895 to 2 by 1926-28. See I. Hirschman, *Sociological Review*, XXVII (1935), 354.

[93] The number of children born per family whose head was aged 50 to 59 years in 1906 was 3.44; 60 to 69, 3.53; 70-79, 3.48; 80 and over, 3.48 (*Statistiques*, p. 13).

[94] See J. Bourdon, *R.d.e.p.*, XLVIII (1934), 485-90.

[95] In Germany, too, as Burgdörfer shows, the decline in natality has been due to the spread of the small family system. The success of the Nazi pronatality policy will turn ultimately upon whether or not those couples which have been induced to procreate one child can be induced to average 3½-4 births. See *Revue économique internationale* (June, 1935), pp. 483-84, 495-99.

Western countries;[96] that of families with 1-2 living children, somewhat greater in France than elsewhere before the war,[97] has increased; that of families with more than two children has decreased.[98]

Although the materials which we have presented indicate that French natality and natural increase improved relative to natality and natural increase in other countries in 1910-33, France faces a growing deficit of births and an increasing rate of natural decrease. Already in 1898-1903 French women were bearing only 97.9 per cent as many children as needed to be born, given the then mortality, to replace the population. The net reproduction rate fell to 0.93 in 1908-13, to less than 0.6 in the war years; it rose to 0.977 in 1920-23, only to fall to 0.929 in 1925-27, to 0.82 in 1933, and to lower levels since 1933.[99] During the next fifteen years, independently of a further decline in specific fertility, the number of births will be depressed below "normal" by the deficit in adults caused by the low birth rate in the war years.[100] The continued decline in

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[96] See, for data in other countries, W. S. Thompson, *Population Problems* (New York, 1930), pp. 117-18.

[97] The percentage of married couples in France and Belgium respectively about 1911 with 0, 1-2, 3-4, 5 and more surviving children was 16, 19.1; 52.1, 39.2; 21.7, 22.5; 10.2, 19.2. The percentage of married couples in France and England respectively about 1906-11 with 0, 1-2, 3-4, 5 and more children living or dead was: 12.4, 16.7; 44.0, 31.0; 24.8, 21.4; 18.8, 30.9 (Huber, *op. cit.*, p. 35).

[98] The percentage of families with 0, 1-2, 3-4, 5 and more living children in 1891-1926 were as follows (*Statistiques des familles*, 1906, 1926):

Families, by Number of Children, 1891-1926

Number of Living Children	1926	1911	1901	1896	1891
0	16.07	15.65	15.95	17.05	17.54
1-2	55.37	51.68	49.74	47.29	47.48
3-4	20.01	22.24	23.25	24.30	24.29
5 and over	8.55	10.43	11.06	11.36	10.69

The percentage of families reported as having no children does not represent the proportion of families voluntarily or involuntarily sterile. For in 1906 only 8.2 per cent of families headed by men married 5 or more years were without children living or dead (*Statistiques*, 1906, p. 20). The percentage of families reported as having no living children in 1891 and 1896 is so high because families which failed to report the number of children apparently were often tabulated as childless (*ibid.*, pp. 19-20). Improved mortality may account for the greater relative number of families of 5 or more children living in 1896-1901 than in 1891.

[99] Kuczynski, *Balance*, I, 51-53; *Measurement*, p. 214.

[100] The war itself cost France about 2,400,000 births, according to one estimate (*J.S.S.P.*, July-Sept., 1933, p. 281). P. Depoid has estimated that

specific fertility will aggravate the war-caused deficit of births.

While a reduction of one year in the age at which women marry would eventually add about 32,000 more births to the procreative yield of a given generation of women, and a reduction of two years would add about double this number,[101] the restoration of French reproduction to a replacement level will have to be achieved primarily through an increase in the specific fertility of women in each age group, particularly in the age groups 20-39. Neither a reduction of mortality in general[102] nor a further reduction of infant and child mortality will suffice.[103] Several years ago A. Sauvy estimated that, assuming

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because of the low birth rate in the war years the number of French births, already 0.5 per cent below normal in 1932, will fall to 10.8 per cent below "normal" by 1940 and remain 6.1 per cent below "normal" as late as 1950. See *Bulletin*, S.G. (April-June, 1935), p. 485.

[101] *Ibid.*, pp. 466-67. A. C. Mukherji has found that fertility among married women is at a maximum in the age group 15-19, falling steadily and appreciably in each higher five-year age group. See *Étude statistique de la fecondité matrimoniale* (Paris, 1935), pp. 76-78.

P. Depoid's study of legitimate fertility in 1930-32 confirms this finding. Correction having been made for the fact that about 40 per cent of legitimate children born to mothers aged 15-19 were conceived *prior* to marriage, it appears that legitimate fertility at age 19 is nearly two-fifths less than at age 15. Married fertility at ages 25, 30, 35, and 40 years is 29, 55, 71, and 86 per cent lower respectively than at age 20. In Norway married fertility at ages 25, 30, 35, and 40 years is 24, 55, 68, and 79 per cent lower respectively than at age 20. The decline in the average age at marriage in France has thus served in some degree to retard the decline in general fertility. In 1930-32 the maximum frequency of marriage among celibate women was in the twenty-second year; in 1901-13, in the twenty-fourth year. In representative continental countries in 1930-32 the maximum was found in the twenty-fourth or twenty-fifth years. See P. Depoid, *Bulletin*, S.G., XXVI (1937), 324-33. On duration of marriage see *ibid.*, XXVII (1938), 269-322.

[102] For a criticism of the views of writers who believe that a reduction in mortality can restore *true* natural increase to a replacement level (e.g., L. Hugouenq, *R.p. et p.*, April, 1935, pp. 92-101; A. Roubakine, *La grande réforme*, March-July, 1935) see J. Bourdon, *R.d.e.p.*, XLIX (1935), 553-64.

[103] Child mortality destroyed about 460 of each 1,000 newly-born in the first four years of life about 1750; 417 about 1780; 293 in 1817-32; 290 in 1856-61; 270 in 1877-81; 209 in 1898-1903; 133 in 1920-23; 108 in 1928-33. French infant mortality, formerly much above that in other Western countries, rose from 155 in 1841-45 to 178 in 1861-70; thereafter it fell gradually to 172 in 1871-80, 164 in 1891-1900, 132 in 1901-10, 124 in 1911-13, 95 in 1921-25, and 67 in 1936. In 1935 but 8 countries (with rates of 40 to 68) of Europe's 27 countries had infant mortality rates below the French (69). Were French infant mortality reduced to 30 (the ideal limit, according to F. Savorgnan, *American Journal of Sociology*, XLI, 1935, 208) only about 19,000 would be saved, about nine-tenths of whom would complete the twentieth year.

specific fertility to remain unchanged, a 60 per cent reduction in mortality would be necessary to establish a stable population.[104] By 1933, given the then specific fertility rates and gross reproduction rate of 1.0, the population could be replaced only if no females died before completing the childbearing period. Since 1933 gross reproduction has fallen below 1.0; and a reduction of mortality, however great, can no longer counterbalance the decline in fertility.

What level the French population will approximate in the future thus depends primarily upon the trends in specific fertility. Were fertility in the nation as a whole to approximate the level of fertility in the least fertile social groups, or that in Paris, the population would decline one-third per generation.[105] Were fertility to increase 14 per cent and were mortality to remain as it was several years ago, France's population would stabilize.[106] Should specific mortality and fertility remain as in 1935, the French population will gradually decline from the present level (41.9 millions) to 38,926,000 in 1960 and 34,231,000 in 1985. Should mortality decline as in 1920-22-1930-32 and fertility decrease as in 1930-35, the French population will decline to 38,283,000 in 1960 and 29,645,000 in 1985.[107]

Should the French population decrease to 38.6 millions by 1960, its number relative to that of Germany will decline about one-sixteenth; relative to that of Italy, about one-fifth; relative to that of Great Britain, about one-eleventh. By 1960 her population, in 1925 nearly 8.6 per cent of that of Europe, will comprise only about 6.5 per cent of that of Europe. Even should she absorb five million immigrants by 1960, her population will decline relative to that of Italy and Europe, forming about 7.5 per cent of that of Europe. After 1960, however, France's population problem will become increasingly difficult, deaths exceeding births in that part of the population derived from the present by 152,000-255,000 in 1960-64 and 200,000-390,000 in 1975-79.[108]

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[104] *J.S.S.P.* (Feb., 1934), pp. 53-54.

[105] Net reproduction in Paris in 1932 was 0.65; in Berlin, 0.40; in Stockholm, 0.375. See A. Landry, *La révolution démographique* (Paris, 1934), p. 63.

[106] A. Sauvy, *J.S.S.P.* (Feb., 1934), pp. 53-54.

[107] A. Sauvy, *J.S.S.P.* (June, 1937), pp. 232-33. No allowance is made for net migration.

The data which we have presented suggest the following main conclusions. First, while it is not determinable whether or not French natality fell prior to the French Revolution, it is evident that a socio-psychological attitude favorable to birth limitation existed already in the early eighteenth century, if not prior to that time. Second, French natality and fertility, similar to that of other European countries prior to 1789, declined to a level below that of other European countries in 1785-1815 and remained lower until the post-war era. Third, the decline in natality is the result of the spread of the small family system and of the decline in the fertility of married, and not of changes in the age and marital composition of the French population. Fourth, it may be inferred from conclusion (3) that the decline is traceable immediately to the increased practice of birth control.[109] Fifth, the lowness of French natural increase is ascribable primarily to the lowness of French natality, not to the highness of mortality. Sixth, the French population is in a state of decline. Seventh, while French mortality is susceptible of some improvement, French fertility must be increased if the French population is to maintain itself or increase. Eighth, the rate of decline in natality and fertility slackened in the post-war years only to increase again in the late 1920's and 1930's.[110] Ninth, the relative demographic importance of France in Europe will diminish despite the fact that the populations of many other European countries are in a state of actual or incipient decline.

[108] *Ibid.;* for European forecasts, see F. Burgdörfer, *Volk ohne Jugend* (Berlin, 1935), pp. 386, 392-98, *Sterben die Weissen Völker?* (Berlin, 1934), p. 37; C. Gini, *Bulletin de l'institut international de statistique*, XXXV (1931), 38.

[109] See Chapter VII for a summary treatment of the spread of contraception in the nineteenth century.

[110] See Chapter X. It should be noted that in the past natality has usually quickened upon the termination of war. However, even as A. B. Wolfe predicted (*J.P.E.*, XXV, 1917, 521-41; also *ibid.*, XXXVII, 1929, 105-09) natality did not return to the pre-war level in North and West European countries other than France and remain there for a number of years as in France. In but 5 of the 12 countries other than France lying in this part of Europe did natality return to the 1913 level for even a year or two. See Kuczynski, *Balance*, I, 9-10, 96-97.

CHAPTER IV

DIFFERENTIAL NATALITY AND FERTILITY

Materials pertaining to differential natality and fertility are of interest for at least three reasons: (a) the trend in the natality or the fertility of a specific group may indicate the ultimate trend of fertility in general; (b) inasmuch as the lives of individuals in different groups are affected by different circumstances, natality and fertility differentials may indicate what conditions are favorable to natality and fertility and what conditions are unfavorable; (c) natality and fertility differentials may produce differences in the rates of natural increase of different groups and thus serve to alter the biological or the class composition of the population. In this chapter are presented materials pertaining to: (a) the drift by department in natality, fertility, and natural increase; (b) the influence of socio-economic composition upon natality and fertility; (c) trends in differentials.

Low levels of natality have come to blanket France in an ever increasing degree (see Table VI).[1] The decline by department has been irregular, even as has the decline in natality in general, reflecting the response of the population to nation-wide and localized variations in political conditions and in industrial and economic prosperity.[2] The rate of decline has varied widely, departments with high natality in base periods tending to experience the greatest relative decline. In 1801-10 to 1891-1900 the percentage decline ranged between 6 in Pas de Calais and 50 in Var and Gers; in 1891-1900 to 1931, between 46 in Bouches du Rhône and +16 in Orne. Between 1801-10 and 1891-1900 the arithmetic average of the birth rates in the first

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[1] Rates from *J.R.S.S.*, LVIII (1895), 647; Huber, *op. cit.*, pp. 678-80; *A.S.*

[2] On the influence of such variations upon national and local natality levels see Levasseur, II, 10-29; G. Cauderlier, *Les lois de la population en France* (Paris, 1902), Part II.

TABLE VI. FRENCH DEPARTMENTS, CLASSED ACCORDING TO BIRTH RATE

Year	Departments with Designated Births per 1,000 Inhabitants												Number of Departments
	40–35	34–30	29–28	27–26	25–24	23–22	21–20	19–18	17–16	15–14	13–12	11–10	
1801–10 ..	24	36	13	8	2	—	—	—	—	—	—	—	83
1811–20 ..	16	41	13	9	3	1	—	—	—	—	—	—	83
1821–30 ..	11	37	19	9	4	3	—	—	—	—	—	—	83
1831–40 ..	6	31	13	17	10	2	4	—	—	—	—	—	83
1841–50 ..	2	17	15	14	19	11	1	4	—	—	—	—	83
1851–60 ..	—	12	14	13	14	21	4	5	—	—	—	—	83
1860–69 ..	—	11	10	16	12	18	11	5	—	—	—	—	83
1877–86 ..	—	8	9	7	14	32	18	6	2	—	—	—	86
1891–1900.	—	2	1	4	10	15	26	19	8	2	—	—	87
1911–13 ..	—	—	—	2	3	1	16	22	27	13	3	—	87
1920–24 ..	—	—	—	—	6	11	15	30	23	5	0	—	90
1926......	—	—	—	1	1	6	18	19	29	16	—	—	90
1931......	—	—	—	—	1	3	14	14	27	25	6	—	90
1933......	—	—	—	—	—	1	5	20	22	24	17	1	90
1935......	—	—	—	—	—	—	6	16	19	24	24	1	90

(highest), second, third, and fourth (lowest) quartiles of departments declined respectively by the following percentages: 37, 38, 28, 27. Between 1891-1900 and 1931 the corresponding percentages were 29, 19, 12, 13. In the present century the annual rate of decline has been greater in general than in the preceding century, the acceleration being most pronounced in the two upper quartiles. As a result, the spread between upper and lower levels has diminished.

Variations in departmental rates of decline have altered appreciably the relative rank of a number of departments in respect to crude natality. Of the 21 departments with the highest natality in 1801-10, 11 and 6 respectively ranked among the 21 highest in natality in 1891-1900 and 1931, and 3 and 7 among the 21 lowest. Of the 21 lowest in 1801-10, 8 and 5 ranked among the 21 lowest in 1891-1900 and 1931; 2 and 5 respectively ranked among the 21 highest. Of the 22 highest in 1891-1900, 9 ranked among the 22 highest and 4 among the 22 lowest in 1931; of the 22 lowest, 10 and 1 respectively among the 22 lowest and highest in 1931.

The behavior of other indices of reproductive activity has resembled that of crude natality. Between 1857-61 and 1892-96 the arithmetic average of the number of legitimate births by department per 1,000 married women 15-45 declined 15, 18, 19, and 12 per cent respectively in the first (highest), second, third, and fourth (lowest) quartiles of departments ranked according to marital fertility in 1857-61. Between 1892-96 and 1931 the rate of decline increased, especially in the departments ranking high in marital fertility in 1892-96, corresponding percentages being 50, 45, 35, 29.[3] Of the 21 departments ranking highest in marital fertility in 1857-61, 10 remained in the highest quartile in 1931, 2 were in the lowest; of the 21 ranking lowest in 1857-61, 7 remained in the lowest quartile in 1931, 2 were in the highest. In the present century both family size and the relative number of large families have decreased less in the low than in the high birth rate departments.[4] Between 1876-77 and 1896-97 the general fertility of women 15-45 declined 20, 17, 12, and 11 per cent respectively in the first (highest), second, third, and fourth quartiles of departments ranked according to fertility in 1876-77. Corresponding declines between 1896-97 and 1931 were 31, 14, 10, 1, the annual rate of decline falling appreciably in departments marked by low fertility in 1896-97. Between 1911 and 1931 the average of the percentages of decline in gross reproduction by department were 18, 5, 5, and 3 by quartiles of departments ranked according to gross reproduction in 1911 and ranging from highest to lowest. The highest rates of decline are concentrated in departments ranking high in gross reproduction in 1911.

Although the absolute spread between indices of reproduction in the 10 departments ranking highest and those in the 10 departments ranking lowest has steadily diminished, the relative spread has diminished only slightly, and then only since about the turn of the century. The average level of fertility among married women in the 10 departments ranking highest exceeded that in the 10 ranking lowest by 108 per cent in 1857-61; by 119 in 1892-96; by 85 in 1931. Corresponding percentages for the fertility of all women 15-45 in 1876-77, 1896-97, and 1931 are 72, 70, 60; for gross reproduction in 1911, 1926, and 1931, 71, 59, 67; for crude natality in 1801-10, 1852-56, 1891-1900, and 1931, 46, 55, 66, 60. The relative spread has declined most with respect to marital fertility; since 1926 it has increased with respect to gross reproduction.

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[3] The percentages are not directly comparable, representing the decline between marital fertility for married women 15-45 in 1892-96 and that for married women 15-49 in 1931.

[4] *Statistiques des familles en 1926*, pp. 15-20.

It is primarily[5] to the secular decline in natality disclosed above that one must ascribe the growth, especially in the second half of the last century, in the number of French departments experiencing an excess of deaths over births. Prior to 1840 the annual number of departments with an excess of deaths remained under 10 in other than several of the war years in Napoleon's day and the cholera years 1832 and 1834. Epidemics, war, dearth, and revolution, singly or in combination, carried the number from 10 in 1840 to 21 in 1847-49 and 47 in 1854-55 and 1859.[6] After falling to 7 in 1860 it ranged between 8 and 39 in the ensuing decade, then rose to 83 in 1871. It fell to 8 at the close of the Franco-Prussian War, only to rise intermittently to 58 in 1892 and 1895. It remained above 30 after 1900, rising to 64 in 1911 and falling to 35 in 1912-13. But one department experienced an excess of births over deaths in the war period 1914-19. Since the war the number of departments with deficits has approximated or exceeded 40, rising to 60 in 1935. The number by periods has risen from 7 in 1836-61 to 38 in 1876-1901 and 45 in 1926-31.[6] Net reproduction rates disclose even more strikingly the effects of insufficient natality. In 1911 only 33 of 87 departments had gross reproduction rates sufficient to replace the population; in 1926, 37 of 90; in 1931, 39 of 90. During the periods indicated mortality declined sufficiently to more than counterbalance the decline in gross reproduction.[7]

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[5] Specific mortality by department varied widely in the nineteenth century and often counterbalanced supra-average crude natality. See G. Cauderlier, *Les lois de la population en France* (Paris, 1902), pp. 97-110 and charts. Even today there is a considerable variation by department in the incidence of certain controllable diseases and in specific mortality. See R. Pierreville, *L'inégalité humaine devant la mort et la maladie* (Paris, 1936), pp. 173-265.

[6] See A. Cauchois, *Démographie de la Seine-Inférieure* (Rouen, 1929), pp. 137-54, for pre-war figures.

[7] Mr. D. V. Glass, who is preparing a revised edition of his study referred to in Chapter X, has computed gross reproduction rates for each department for 1911, 1921, 1926, and 1931, and has kindly supplied them to me.

Although the variations by department in the rate of decline in fertility indicate that some conditions are much more favorable to fertility than others, it is difficult to isolate fertility-depressants by department. The available data do suggest several relationships, however. In general, two types of socio-economic change are responsible for the decline in natality and for variations in the rate of decline: (a) alterations in regional socio-cultural milieu which, assuming other characteristics of a population to be constant, may be either relatively favorable or relatively unfavorable to fertility; (b) alterations in the rural-urban, nationality, or socio-economic composition of the population. These two types of change will now be examined.

The available data suggest that in the past, at least, regional socio-cultural milieus varied with respect to their favorableness to fertility. Writers have alleged (without offering much supporting evidence) that natality has shown most resistance to decline in industrial regions where those who work in heavy industries and mines are concentrated; where foreign workers are massed; where the population is insulated from the civilization and customs of the rest of France and is marked by simplicity of habits and lack of ambition (e.g., Britanny; formerly, Corsica); where the population is agricultural and poor.[8] Census returns on the size of families in which childbearing probably was completed in 1885-95 indicate that while size of family varied from occupation to occupation in the latter half of the nineteenth century, it varied even more within given occupational groups from department to department. Data in Table VII[9] reveal that among fishermen and sailors family size was 142 per cent greater in Nord than in Gironde, whereas the fisherman and sailor average for France exceeded that for French domestics by only 68 per cent. The greatest family size, by occupational groups, was found precisely in the departments where family size was much above the French average; the lowest, in departments where the general average fell much below the French average. Among the one-fourth of departments ranking highest in family size were 60-100 per cent of the one-fourth of departments ranking highest in fertility for each occupation indicated in Table VII; among the lowest one-fourth were 50-100 per cent of the lowest one-fourth for each occupation.[10] Thus it is evident that although occupation tends to influence the level of fertility, localized outlooks and culture in given departments exercise an appreciable influence on the level of fertility within occupational groups living in such departments. This conclusion is supported in part by a study of family among *cantonniers* and *gardes champêtres* employed by the state. Within the 5 regions (France was divided into 15 regions) ranking highest in family size for all occupations were found 4 and 5 respectively of the regions ranking highest

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[8] G. Mauco, *Les étrangers en France* (Paris, 1932), pp. 23-24; articles on demography by M. Jordan, in *Pour la vie* (1928-32); M. Augé-Laribé, *L'évolution de la France agricole* (Paris, 1912), pp. 129-30.

[9] Adapted from *Statistiques des familles* (1906), pp. 32-33.

TABLE VII. NUMBER OF CHILDREN PER 100 FAMILY HEADS, AGED 60-69, MARRIED OVER 24 YEARS, AND CLASSED BY PROFESSION, IN 1906

Profession	France	Department where number is highest for designated occupational group	Department where average is lowest for designated occupational group
Rentiers No Profession	316	481	231
Fishermen Sailors	509	747	304
PATRONS			
All Classes	371	632	237
Agriculture	370	627	234
Industry	383	670	255
Liberal Professions	305	389	225
EMPLOYÉS			
All Classes	322	522	245
Public Services	309	402	257
WORKERS			
All Classes	420	596	270
Agriculture	421	595	260
Forestry, etc.	397	607	277
Metallurgy	433	572	245
Public Works Building	421	631	287
Fabrication Land Transportation	450	631	312
Domestics Personal Service	303	412	241
Public Service	377	687	273

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[10] Computed from *ibid.*, pp. 17, 32-33.

in family size in these two occupational groups; within the 5 regions ranking lowest the corresponding correlation was just barely positive.[11] Family size varied less among employés of the government and railroads, who changed location frequently, than among those stationary.[12]

If the conclusion suggested by the data just presented is valid, it is evident that the decline in natality levels is associated with the growing strength of factors which tend to dissolve elements in any given regional cultural milieu that are favorable to natality and fertility and to solidify elements that are unfavorable thereto. Whether or not this growth in strength is associated with trends that are immanent in the present capitalistic cultural complex and therefore inexorable is not determinable from the data at hand for France or other nations. In the closing chapter, however, it will be indicated that a high but contingent degree of probability attaches to the proposition that the decline is associated with such immanent trends.

The second cause of decline in over-all fertility—changes in the socio-economic and geographical composition of the population—has also been operative in France. The available data indicate that changes in the composition of the French population have served to depress natality and fertility on the balance, but they do not permit a careful quantitative estimate of the extent of such depression. It is merely determinable, first, that certain conditions are less favorable to fertility than others; second, that changes in the direction of the less favorable have predominated. Female marital composition has steadily improved. The relative number of foreign-born and of educated has increased. There have been striking shifts (see Chapter II) of the population from less wealthy into more wealthy areas; from agricultural and rural communities into those nonagricultural and urban; from agricultural occupations into industrial and especially into commercial, governmental, and liberal occupations. The relative number of persons whose conduct is subject to religious influences has apparently declined.

[11] Computed from *ibid.*, pp. 96-97; see also p. 6.

[12] *Ibid.*, p. 5.

Historically and at given moments of time the relationship between the fertility of the married and the frequency of the married in the population has been inverse. Evidently men have tended to marry in relatively greater numbers as they have acquired the practice of family limitation. Or, stated in other words, in France the population has always (since 1860 at least) sought to limit natural increase, either by deferring and/or avoiding marriage, or by limiting fertility within the married state. Between 1851 and 1931 the percentage of all women of childbearing age who lived in the married state rose from 52.4 to 61.7; their fertility fell from 179 to 104. In 1857-61 the arithmetic averages of the number of legitimate births by department per 1,000 married women aged 15-45 and living in groups of departments (10 in each of the first 7 groups, 8 and 7 in the last 2) ranging from that group with the largest percentage of females 15 to 45 married to that with the smallest were as follows: 160.3, 181.0, 199.2, 196.6, 211.3, 222.4, 261.8, 282.1, 281.9. In 1892-96 the corresponding averages were: 134.5, 157.9, 163.5, 161.2, 170.7, 195.0, 200.0, 236.3, 269.5. In 1931 the corresponding averages for married women 15-49 for 9 groups of 10 departments each were: 98.0, 103.7, 99.9, 104.9, 93.4, 106.1, 109.7, 121.9, 134.7. In short, in each period, but particularly in the two earlier periods, the relative number of women of childbearing age by department who were married was highest in departments where marital fertility was lowest, lowest in departments where marital fertility was highest. By 1931, when variations in departmental marital composition were no longer so extreme as in the preceding century and when the practice of family limitation had become more widespread, the relationship noted no longer held as rigorously as in the preceding century.

The level of education of the French population has risen steadily. Of the newly married husbands the percentage who could sign their names rose from 29.1 in 1686-90 to 47.9 in 1786-90, 54.3 in 1816-20, 68.7 in 1854-56, and 97.0 in 1904-05; of the newly married wives, 14, 26.9, 34.7, 53, and 96.[13] The percentage of conscripts who could not read and write fell from 47.8 in 1832-34 to 20.5 in 1867-68, 4.6 in 1898-1900, 2.8 in 1911-12, and 3.6 in 1933-34.[14] Between 1901 and 1931 the percentage of the male population aged 10 years or more who could not read and write declined as follows: French, about 13.6 to 3.7; foreign, 21.7 to 16.2. Corresponding declines in the female population were: French, about 19.2 to 5.2; foreign, 24.3 to 16.3.[15] The number of primary students per 10,000 inhabitants rose from 932 in 1850 to 1,258 in 1875, 1,343 in 1880-81, and 1,425 in 1912-13. The number of secondary students per 10,000 inhabitants rose from about 10.8 in 1810 to about 15.3 in 1860, 24.9 in 1881, 26.5 in 1900, 34.8 in 1913, and 58.6 in 1935.[16]

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[13] *A.S.*, LI (1935), 19* ff.; Lavasseur, II, 478.

The spread of education and literacy has contributed to the decline in the birth rate both by making the population more accessible to natality-depressing stimuli and by accelerating the shift of the population to areas and situations less favorable to natality.[17] Nineteenth-century writers saw in the diffusion of education a check to population pressure. Early studies reveal no negative relation between natality or births per marriage by region and ability to sign name.[18] In 1901 the level of crude natality was appreciably higher in departments where the illiteracy rate was very high than in departments where it was low, only the most industrial departments constituting exceptions.

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[14] Computed from *A.S.*, LI, 19* ff.

[15] Census of 1931, I, Part II, p. 51. The percentage was higher prior to the enactment of the law of 1882 which made primary education obligatory. In 1872, 36.9 per cent of the French population could not read (Levasseur, II, 497, note).

[16] Computed from *A.S.*, LI, 24*, 27*. The percentages for secondary students are slightly too low for 1810 and 1860, as female students (4.9 per cent of the total in 1881) are not included.

[17] M. Fayet commented on the latter effect in 1858 (*J.d.e.*, 2d ser., XVIII, 1858, 86-89). Cauderlier (*op. cit.*, pp. 78-79), who attributed migration to variations in economic conditions, said that it depressed natality in departments of emigration by: (a) carrying away the young and vigorous who are both more fecund and more fertile; (b) carrying away the young recently married; (c) by decreasing the number of workers relative to that of dependents, thus making it more difficult for the former to assume the family burdens associated with marriage.

[18] Cf. two maps for 1776-90 in Levasseur (I, 269; II, 493); see also T. A. Welton, *J.R.S.S.*, XXIX (1866), 273.

But since poverty was widespread in the departments marked by great illiteracy, poverty may have been a co-operating or even a chief cause of high natality.[19] Data for 1931 reveal, if anything, a negative correlation between gross reproduction and illiteracy. The arithmetic average of percentages by department of females over 10 reported as illiterate in 1931 was 4.78 in the 30 departments ranking highest in gross reproduction; 5.27 in the middle 30; and 8.68 in 30 ranking lowest in gross reproduction. Illiteracy was appreciably higher in 1931 in the 30 departments ranking lowest in marital fertility than in the 30 ranking highest, and somewhat higher than in the intermediate 30. While these figures do not prove that illiteracy is necessarily favorable to fertility, they do indicate that the total positive effect of illiteracy upon fertility, if any, was not sufficient to stabilize other determinants of fertility. Illiteracy may serve as a check to fertility if it impairs the individual's earning capacity in a greater degree than it diminishes his responsivity to want-engendering stimuli.

Concerning the effect of education per se and of religious persuasion upon natality, the available data are too limited to permit a definite statement. J. Bertillon did not attach great weight to either factor in 1911.[20] Cauchois concludes that fertility is least in the "middle class" and among those engaged in "*petit commerce*" or living in urban milieus, that fertility is slightly above average among the wealthy and especially among those subject to "religious influence."[21] In Seine-Inférieure in 1925-26 the number of living children in families whence came those attending school and college ranged from 2.1 to 4.8, averaging 3, a level apparently somewhat higher than the comparable departmental level. Families appear to be somewhat smaller, other things equal, among those who send their children to the public and nonreligious schools. In Seine-Inférieure the families whence came students attending Catholic colleges averaged nearly four children, living and dead. For all of

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[19] R. de Felice, *Naissance en France* (1910), pp. 189-90, 244.

[20] *Dépopulation*, pp. 117, 126, 136-37, 262-63.

[21] *Ibid.*, pp. 61, 79-80, 326-28; see also Leroy-Beaulieu and Naudeau below, notes 66 and 68.

France, families whence came Catholic students averaged 3.97 children, living and dead. Families from which came persons enrolled in religious communities averaged 6.6 children, an average reflecting perhaps the greater piety of families that supply persons with religious vocations.[22]

Data on natality and fertility in the foreign population, although scant, indicate that a large proportion of crude natural increase in France is supplied by the foreign population and that, other things equal, family size (and probably fertility) is greater in the foreign than in the French population. An inquiry conducted in 1888 by Turquan indicated that foreign natality was higher than French natality and that foreigners contributed one-fourth of the crude natural increase. Births, deaths, and natural increase per 1,000 French were 22.2, 21.0, and 1.2; per 1,000 foreigners, 26.0, 16, 10. Birth rates for respective foreign groups were: English, 13; Swiss, 21.6; German, 23.4; Spanish, 24.3; Belgian, 24.4; Italian, 30.8.[23] In 1927-31 foreign natality, mortality, and natural increase approximated 22.2, 12.2, and 10 per 1,000; French, 18, 16.9, and 1.1. Of the 290,000 excess of births over deaths, 130,000, or 45 per cent, were of foreign parentage.[24] While the presence of foreigners has caused general fertility to be relatively high in some communes and arrondissements, their presence is not reflected in departmental fertility levels, both because their relative number is too small in most departments and because departments favored by foreigners are marked by conditions not comparatively favorable to fertility. In 1931 both gross reproduction and fertility among the married were appreciably lower in the 20 departments with relatively the most foreigners than in the 10 with relatively the fewest. Moreover, births per 1,000 women aged 15 to 45 declined as much between 1896-97 and 1929-31 in the 20 departments with relatively many foreigners as in the 10 with relatively few.

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[22] See data in Cauchois, *op. cit.*, pp. 61, 252-54, 264, 279-80. Concerning a low-natality group see M. Guillet, *R.d.d.m.* (June 1, 1934), p. 638.

[23] Turquan, *Contribution à l'étude de la population et de la dépopulation* (Lyon, 1902), pp. 150-52; *J.d.e.*, 4th ser., XLVII (1889), 421-22. Foreign births were again distinguished in 1927.

[24] *Notizaria Demografico*, VI (1933), 589-92.

Greater intramarital fertility, and not favorable age and marital composition, is primarily responsible for the higher level of natality and natural increase in the foreign population. In 1931, of the French and naturalized population, 11.3 per cent consisted of married women aged 15-39; of the foreign, 11.5. In 1911 the percentages of French and foreign families, respectively, with the designated number of living children were: none, 15.6, 18.1; 1-2, 51.9, 44.6; 3-4, 22.2, 23.9; 5 and over, 10.3, 13.4.[25] Where the family wage system is in effect foreign workers receive allocations out of proportion to their relative numerical importance in the employed population. An inquiry in eleven departments in 1926 revealed that French families averaged 2.02 children, foreign, 2.28; that 36 per cent of the foreign and 31 per cent of French families averaged over 2 children per family; that 53 per cent of the French and 26 per cent of the foreign families were without children under 21 years of age; that 27 per cent of the foreign and 12 per cent of the French families had 5 or more children under 21 years of age. An inquest in a number of cities revealed the following number of children per family: Spanish, 2.6; Poles, 2.5; Italians, 2.3; French, 1.9.[26]

The conclusions inferable from the data already presented are supported by data in Table VIII pertaining to the number of surviving children per family, classified as to the occupation, economic rank, and nationality[27] of the head of the family. While the age composition is not always identical for each group, the figures indicate in general that fertility among the married is higher in the foreign than in the native group.[28]

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[25] The higher proportion of childlessness among the foreign is apparently due to the fact that the foreign family heads were younger. Forty per cent of the foreign and 30 per cent of the French family heads were under 40 years of age (see Huber, *op. cit.*, p. 39).

[26] Mauco, pp. 183-86.

[27] "Native" = "French or naturalized"; "foreign" includes those born outside of France or in France and not naturalized.

[28] Table VIII is taken from *Statistiques des familles en 1926*, pp. 25, 34. Age composition is not given for any group. However, the average age for proprietors is reported as male, 49; female, 44. Corresponding averages for employés were 35, 31; laborers, 33, 31; isolés, 46, 45; unemployed, 40, 34 (*ibid.*, p. 29). Children per family "without profession" numbered: French, 2.08; foreign, 2.48 (*ibid.*, p. 25).

TABLE VIII. NUMBER OF SURVIVING CHILDREN PER FAMILY CLASSIFIED AS TO ECONOMIC RANK, OCCUPATION, AND NATIONALITY, IN 1926

Economic Rank	Proprietor		Employé		Laborer		Isolés		Unemployed Laborers and Employés		All Ranks	
Occupation	Native	Foreign	Native	Foreign	Native	Foreign	Native	Foreign	Native	Foreign	Native	Foreign
Fishing	2.56	....	1.52	....	2.28	....	2.17	....	2.49	....	2.43	2.35
Forestry / Agriculture	2.38	3.09	1.76	2.27	2.00	2.37	2.17	2.38	2.32	....	2.31	2.64
Extractive Industries	2.34	2.46	1.78	2.11	2.26	2.48	2.32	2.36	2.52	....	2.24	2.64
Industries of Transformation, or Manufacturing	2.00	2.07	1.42	1.56	1.81	2.03	1.84	2.03	1.74	2.00	1.81	2.01
Transportation	2.04	2.33	1.51	1.39	1.68	1.70	2.04	2.22	2.00	2.15	1.71	1.97
Commerce / Banking	1.70	1.86	1.25	1.21	1.60	1.77	1.70	1.96	1.22	1.41	1.57	1.70
Liberal Professions	1.81	1.53	1.34	1.30	1.66	1.67	1.56	1.28	1.22	....	1.56	1.33
Personal Cares (Clerks)	1.41	1.45	1.13	1.28	....	....	1.52	1.66	1.24	....	1.39	1.44
Domestics	....	....	....	....	1.54	1.61	....	....	1.47	....	1.54	1.61
Public Services	....	....	1.39	1.09	1.94	2.12	....	....	....	....	1.66	1.47
All Professions	2.25	2.43	1.38	1.33	1.83	2.14	1.94	2.04	1.77	1.98	1.95	2.12

It is not probable, however, that these differences will persist. Between 1911 and 1926 the number of surviving children per foreign family declined in no greater degree (2.29 to 2.17) than that per French family (2.13 to 1.98).[29] In this interval, however, the foreign population apparently became more proletarian. Careful students of French immigration find that immigrants rapidly learn contraceptive practices and acquire the relatively higher French standard of living which spurs them to limit family size.[30]

That fertility varies by region, occupation, and socio-economic class or status has been noted by French demographers for more than one hundred and fifty years. Moheau and others observed in the eighteenth century that natality and natural increase were higher in rural than in urban areas; that family size was smaller in portions of the bourgeoisie than in the laboring population; that "the nobility does not people"; that the nobility living in large cities, especially Paris, were less fertile than those living in rural districts; that because of the effects of war, the disinclination of younger sons to marry, and the greater proneness of noble girls to become nuns, the ranks of the nobility were kept intact only through the ennobling of commoners.[31]

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[29] *Ibid.*, p. 21.

[30] Mauco, *Les étrangers*, p. 186; J. Bourdon, *R.d.e.p.*, XLVIII (1934), 490-91.

Certain of these views were repeated and in part substantiated in the nineteenth century. In 1837 H. Passy observed that births per marriage in the four wealthiest Paris arrondissements numbered two, whereas the average in the remaining arrondissements ranged between 2.1 and 3.2; that natality was inversely related to wealth; that the ranks of the rich were kept intact only through the influx of persons from the lower classes.[32] In 1856-65, according to A. Bertillon, natality was nearly one-seventh higher in the 21 departments with relatively the smallest number of proprietors than in the 30 with relatively the largest number.[33] The census of 1866 revealed among proprietors in agriculture 3.53 persons per family; in industry, 2.98; in commerce, 2.73; in the liberal professions, 1.74. Among workers in agriculture the average was 2.4; in industry, 1.86.[34] Since families or households included others than members of the family proper, these averages at best merely suggest greater fertility among agriculturalists. Levasseur found in 1886 that, contrary to common belief, family size was as great in more subdivided as in less subdivided agricultural areas; that subdivision of soil was not a natality-depressant.[35] C. Richet concluded that "it is the bourgeois classes most elevated in the social hierarchy who have the fewest children."[36] V. Turquan's conclusions support an earlier observation that the local cultural milieu has an effect upon fertility, for he found fertility to be associated inversely with wealth and non-agricultural life in most departments but not in all.[37]

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[31] A century later, according to Levasseur (III, 182), the French nobility were averaging but 2.7 children per family, whereas other European noble families were averaging 3.0-5.1. The French average in 1890-1922 was below the Belgian and apparently below the French as of 1880; it exceeded that among French employés (F. Savorgnan, *Metron*, IV, 1924, 563, 573).

[32] See *A.s.m.p.*, 2d ser., II (1839), 291 ff.; *J.R.S.S.*, II (1839), 462. For a similar view see A. Cochut, *R.d.dm.* (April 1, 1846), pp. 37-62.

[33] Levasseur, II, 75; III, 176, 178.

[34] *Ibid.*, III, 167.

[35] *Ibid.*, III, 176.

A number of writers concluded that fertility and family size were inversely related with wealth and with such indices of economic foresight as insurance and savings per person. In 1876-80 Tallqvist found the number of legitimate births per 1,000 married women 15-50 was highest in departments with the lowest average successoral value per inhabitant; lowest in the departments with the highest average successoral values, and tending to rise by groups of departments as average successoral values fell.[38] Data secured in 1898 revealed that family size was smallest in those parts of the population leaving relatively the greatest number of successions, largest in those leaving relatively the smallest number of successions; that the total value per succession was somewhat larger in families of 1-3 children than in families of 4 or more children.[39] In 1877-81 the number of births per 1,000 women 15-50 by groups of departments was inversely related to the relative number of persons in these departments with insurance, and to the relative numbers with savings accounts, indicating a positive correlation between "foresight" and lowness of natality. This relationship prevailed, Felice believed, up to the World War.[40] Observation of the inverse relation between savings and fertility led some to conclude that a falling interest rate depressed natality; others to believe that a sufficient fall in the return on capital would lead men to place less stress on family limitation and saving.[41] Reports on the economic condition of large families were consistent with the above findings, in part because a large number of dependents prevents wealth accumulation. Of the 232,188 families reported as having 7 or more children in 1889, only 5,475 were not poor or indigent. In 1910, of the 368,639 families with 4 or more children, 237,802 (i.e., 65 per cent) were in "*une situation nécessiteuse permanente*"; of the 1,712,322 children, 63 per cent.[42]

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[36] *R.d.d.m.* (June 1, 1882), p. 597. [37] *Contribution*, pp. 65, 130, 137.

[38] Cited by Levasseur, III, 178-79.

[39] Bertillon, *Dépopulation*, p. 106; Turquan, *Contribution*, pp. 133-35.

[40] Bertillon, *Dépopulation*, pp. 151-54; Felice, *Naissances*, p. 180; C. Letourneau, *The Evolution of Marriage* (New York, 1911), p. 352.

[41] See De Felice, *op. cit.*, p. 224; J. Jung, *Des moyens actuellement proposés pour favoriser l'accroissement de la natalité en France* (Paris, 1903), p. 241; see also Chapter VII, below.

At the turn of the century, according to J. Goldstein's findings, fertility and natality not only were highest but were declining most slowly in departments wherein the population consisted predominantly of very low income groups or of an industrial proletariat. Fertility and natality were lowest and declining most rapidly in departments with a relatively large middle class, or with a relatively large non-poor and non-proletarian rural population. Hence he inferred that France could bolster her natality and natural increase chiefly by improving public hygiene, by protecting her industrial workers, and by establishing fiscal, commercial, and protectionist policies designed to stimulate heavy industry and the demand for industrial and technical workers and thus increase their number and their willingness to procreate.[43]

In support of his conclusions Goldstein showed that between 1876-77 and 1895-96 in the 47 least industrial departments fertility (i.e., births per 1,000 women 15-45) was somewhat higher and somewhat less prone to decline in the more proletarian (i.e., with a high ratio of agricultural laborers to farm proprietors) than in the less proletarian. He showed, also, that in the last quarter of the nineteenth century fertility in the least rural departments was one-fifth higher than in the non-poor rural departments, and one twenty-fifth higher than in the poorest but most rural departments; that in the same period fertility was about one-seventh higher in the group of most industrial departments (i.e., with the greatest per capita coal consumption and investment in horsepower and industry) than in three groups of less industrial departments, but only about 6 per cent higher than in the group of departments least industrial and at the same time most poor.[44] Goldstein sought also to show that fertility declined less between 1876-77 and 1895-96 in the more proletarian and less agricultural departments than in the less industrial and rural but non-poor departments. However, while his figures showed a lesser decline in the most industrial and in the least well-to-do rural departments, they revealed an appreciable decline in all the departments and a percentage decline in the most declining group but one-sixth above that in the least declining group.[45] Wherefore it is evident that neither industrialization nor poverty constituted an insuperable obstacle to the tendency of fertility to fall. Moreover, fertility has continued to fall, despite an increase from 41 to 50 in the percentage of employés and workers who work in establishments employing more than 100; and it is much lower in France than in many countries with less large-scale industry.[46]

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[42] Bertillon, *La dépopulation*, p. 273; Leroy-Beaulieu, *La question*, p. 460.

[43] *Bevölkerungsprobleme und Berufsgliederung in Frankreich* (Berlin, 1900), pp. 140, 151, 200-01, 206. The author cites nearly 300 titles.

Goldstein's conclusions are not supported by a comparison of trends in marital fertility between 1857-61 and 1892-96. Twelve departments experienced declines of 25 to 33 per cent; 14, declines of 6 to +8 per cent. The latter 14 were on the average appreciably more rural, less industrial, and apparently less wealthy than the former 12, or than the 9 least urban among these 12. The marital composition of these 12 was only slightly more favorable to fertility than that of the group of 14. The average percentage decline in fertility (births per 1,000 women 15-45) was but half as great in the group of 14 as in the group of 12. The average level of marital fertility in 1857-61 was higher in the group of 12 than in the group of 14.

In France it has been asserted frequently (see Chapter VII) that the desire to limit family size is perhaps more pronounced in the agricultural than in the nonagricultural and urban population. In most countries, on the contrary, it is believed that fertility is higher in rural than in nonrural areas. While the materials available do not permit a complete resolution of these seemingly contradictory views, they do indicate that the spread between rural and urban natality and fertility levels has been less pronounced in France than in other lands.

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[44] *Ibid.*, pp. 123, 144-46, 152-53, 203-04.

[45] *Ibid.*, pp. 146, 202-04.

[46] For comparative data by nation on scale of industry see *I.L.R.*, XXVII (1933), 839-59; for trends in France, see Census of 1931, I, Part III, p. 82.

In the nineteenth century crude urban natality exceeded crude rural natality, presumably because the age composition of the immigration-fed urban population was more favorable to crude natality. Rural natality rose from 24.8 in 1853-60 to 25.8 in 1861-65, declining to 25.3 in 1874-78, 21.4 in 1899-1903, 19.6 in 1909-13, and 19.56 in 1920. Urban natality in corresponding periods was 28.8, 28.0, 26.7, 21.9, 18.8, and 19.38.[47] Inasmuch as rural natality declined relatively less, the spread between rural and urban levels disappeared in the present century. Crude natality has been lowest in rural centers and in cities of 10-100 thousand population, particularly in cities of 20-30 thousand prior to 1900. In 1900-14 the Paris rate fell below and the rural rate rose above the level of rates in cities of more than 5,000. The pertinent rates are given in Table IX.[48]

Table IX. Birth Rates, Rural and Urban, 1887-1920

Cities, etc., by size	1887–90	1897	1907	1912	1919	1920
Paris	24.91	22.22	18.66	16.95	13.32	19.32
Cities over 100,000, excluding Paris	25.31	23.66	20.20	18.91	15.16	25.40
Cities, 30,001-100,000	23.65	22.75	19.82	18.18	15.67	23.22
Cities, 20,001-30,000	22.76	21.68	19.09	18.33	14.54	23.98
Cities, 10,001-20,000	23.34	22.78	20.14	19.23	14.15	21.67
Cities, 5,000-10,000	23.82	23.79	21.21	20.28	13.99	21.97
Rural, places under 2,001	22.13	21.94	19.69	19.30	11.70	19.56
France	22.85	22.3	19.7	19.0	13.0	21.4

Given correction for differences in age composition, natality seems to have been highest in places under 5,000 and in rural sections. Data presented in Table X indicate that age composition was more favorable to natality in the urban population; that both the ratio of children under one year of age and the

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[47] Rates from Levasseur, III, 167, note; J. Bourdon, *R.d.e.p.*, XLII (1928), 403; *A.S.*, XLIV (1928), 15*; Legoyt (see note 58).

[48] The urban rates are from *A.S.*, XIX, and later volumes. The rural rates are calculated from *A.S.*, XLIV (1928), 15*.

TABLE X. NATALITY AND AGE COMPOSITION, RURAL AND URBAN, 1891-96

Place	Births per 1,000 persons aged 20-39 in 1896	Children 0-1 per 1,000 persons aged 20-39 in 1891	Per cent of population aged 20-39 in 1891
Paris	54.8	30.8	40.3
Cities of 100,000 and over	64.2*	39.7	37.0
Cities of 30,000-100,000	61.2	26.7	37.5
Cities of 20,000-30,000	59.4	43.5	36.3
Cities of 10,000-20,000	65.4	49.0	34.7
Cities of 5,000-10,000	72.6	55.9	31.8
Chief places under 5,000	....	51.0	29.6
Rural areas and places under 5,000	81.4	....	....
All cities	62.6	42.4	36.1
France	73.8	58.4	30.1

*Paris not included.

number of births per 1,000 persons aged 20-39 were lowest in the larger cities and lower in all cities than in rural places.[49] In Paris in the second half of the last century and in the present century the fertility of married women remained appreciably below the French level.

The implication of the preceding data—that the rural population has been relatively more fertile, considering age composition, than has the urban population—is partly corroborated by materials on the marital composition and fertility of employés and workers in the public services in 1906. The percentages of celibates among public employés and workers, aged over 25 years, were respectively: Paris, 16.4, 8.1; cities of 50,000 and over, 9.2-11.8, 5.0-7.4; cities of 5,000 to 50,000, 8.8-10.3, 3.7-4.3; towns under 5,000, 10.3-15.2, 5.5-13.8.[50] In 1906 the average number of children ever born per employé and per worker, respectively, who was or had been married, was: Paris, 1.75, 2.58; cities of 50,000 and over, 2.0, 2.73; cities of 5,000 to 50,000, 2.17, 2.77; towns under 5,000, 2.43, 2.95. The average number of surviving children per employé and per worker, married more than 15 years, was respectively: Paris, 1.83, 2.4; cities, 50,000 and over, 1.98, 2.26; cities, 5,000-50,000, 2.06, 2.35; towns under 5,000, 2.29, 2.82. For each group married fertility was greater, the smaller the community.[51]

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[49] Rates in the second column are calculated from *A.S.*, XIX, 19; in the third and fourth columns from P. Meuriot, *Des agglomérations urbaines*, p. 356, note. In 1896 the crude birth rate was 22.3 in places under 5,000; in places, 2,000-5,000, 23.1; in rural places, 21.9.

[50] *Statistiques des familles* (1906), pp. 82-83. Marital composition was least favorable to fertility in Paris and in cities of less than 5,000.

Other data on family size support the view that fertility was lower in urban than in rural areas, allowance being made for differences in age composition. In 1901 the numbers of surviving children per family and per marriage lasting more than 15 years were respectively: Paris, 1.57, 1.99; cities of over 50,000, 1.83, 2.28; other communes, 2.31, 2.66.[52] In 1906 agricultural proprietors had larger families than had proprietors in commerce and in the liberal professions but less large than those of proprietors in industry, particularly in large-scale industry. The heads of families engaged in agriculture tended to have a determined number of children more rapidly than the heads of families engaged in industry and thereafter to discontinue procreation. Agricultural workers, while less fertile than workers engaged in the heavy industries and transportation, were more fertile than workers in general.[53] In 1911 and 1926 the number of surviving children per family head of given occupational status remained higher in agriculture than in most other professions (Tables VIII, XI, XII). In the years just preceding the World War the number of childless families was relatively greater in urban than in rural communities; the relative number of families of 3 or more children was about 36 per cent greater in the rural than in the urban population.[54] Meuriot's studies lead him to conclude that family size and fertility were greater in rural than in urban areas.[55] In sum, the various types of data pertaining to rural natality and fertility indicate that rural life, while not as favorable to fertility in France as elsewhere relative to urban life, is more favorable on the whole than a nonrural, nonagricultural mode of existence.

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[51] *Ibid.*, pp. 86 ff.

[52] *Ibid.*, pp. 86-87. In each instance the families of public employés and workers were below the national average.

[53] *Ibid.*, pp. 4, 30-33.

[54] Cauchois, *op. cit.*, p. 275; also pp. 155-56.

[55] *Op. cit.*, pp. 370-72. Mortality was higher in urban areas (*ibid.*, p. 373).

The balance of births and deaths has been more favorable to natural increase in rural than in urban areas since 1887. The annual number of births exceeded deaths 12 times in 1887-1921 in cities of over 100,000; 13 times in rural communities and areas; 15 times in cities of 5,000-20,000; 26 times in cities of 20,000-100,000. In 1887-1921 births exceeded deaths only in the rural population, deaths exceeding births in all places of 5,000 or more. In 1887-1913 births exceeded deaths in the rural population and (slightly) in cities of 5,000-20,000; deaths exceeded births in larger places, and in the combined population living in cities of 5,000 and over. In short, since 1887 such natural increase as has taken place is ascribable to the rural population.[56]

Variations in departmental indices of fertility do not correspond very closely with departmental variations in rural-urban composition.[57] When the 81-90 French departments for which we have data are ranked according to rural composition and divided into 8-12 groups including the same (or nearly the same) number of departments and ranging from the most rural to the least rural groups, the indices of average fertility or natality by group do not manifest a regular and consistent pattern. The average of crude birth rates by department in 1801-10 for groups of departments ranging from those with the lowest to those with the highest percentage of population in cities of 5,000 or more about 1815 are: 33.3, 31.1, 32.4, 32.7, 31.3, 28.4, 35.0, 31.6, 32.6, 32.6, 31.1, 32.6. Natality was thus nearly the same in the most urban as in the least urban quartile. When 81 departments are divided into eight groups, ranging from most to least rural (as defined in Chapter II) in 1846, indices of natality and fertility run as follows: arithmetic average of departmental birth rates in 1801-10, 33.0, 30.4, 31.8, 31.7, 31.0, 32.5, 33.1, 33.5; arithmetic average of departmental birth rates in 1852-56, 27.3, 24.7, 26.2, 24.6, 24.7, 26.6, 28.4, 29.9; arithmetic average of legitimate births by department per 1,000 married women 15-45 in 1857-61, 235.6, 214.3, 223.7, 215.2, 181.3, 212.7, 220.6, 217.1. Corresponding rates for years centering at or near 1896 are: crude birth rate, 22.4, 21.3, 21.3, 18.9, 21.3, 21.1, 20.6, 23.2, 22.6; births per 1,000 women, 15-45, 105.7, 103.1, 98.9, 98.4, 98.3, 96.2, 93.5, 103.3, 90.9; legitimate births per 1,000 married women, 15-45, 219.9, 198.4, 189.5, 161.8, 185.6, 165.4, 170.8, 186.3, 171.4; children born per family (Census of 1906), 3.26, 3.01, 2.97, 2.65, 2.90, 2.75, 2.74, 2.88, 2.58. Corresponding averages for 1931 are: gross reproduction, 1.186, 1.241, 1.262, 1.239, 1.242, 1.072, 1.164, 1.129, 1.021; legitimate births per 1,000 married women, 15-49, 116.7, 121.2, 111.1, 114.5, 112.3, 96.6, 104.7, 104.9, 91.4.

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[56] Computed from *A.S.*, XLIV (1928), 15*.

[57] Gross reproduction rates given below are those of Glass; data on marital composition and marital fertility for 1857-61 and 1892-96 are adapted from Cauderlier; general fertility rates are computed from Goldstein's data. A thoroughgoing correlation analysis (which we hope to publish eventually) will probably corroborate the conclusions suggested by the pairing of demographic and socio-economic indices along lines employed in this chapter.

The arrays of rates presented indicate at most that, allowance having been made for age and marital composition, fertility appears to have been somewhat higher in the more rural than in the less rural departments.[58] The arrays of rates based upon rural composition as of 1846 indicate that in 1801-10 and 1852-56 natality was slightly higher in the least than in the most rural departments, and higher in each category than in the intermediate departments; that married fertility was slightly higher in the more rural than in the less rural departments. In no instance is the relationship consistent throughout. In 1896 crude natality was slightly higher in the two most urban groups; fertility slightly higher in the most rural group; in neither instance did this relationship hold for the entire array. Married fertility was appreciably higher in the two most rural groups, but again the relationship is not consistent. The number of children per family was highest in the most rural groups, lowest in the most urban, with the relationship otherwise irregular. In 1931 gross reproduction was definitely higher in the more rural groups, although the relationship was not consistent throughout. The same conclusion holds for marital fertility. It is possible that the influence of a rural milieu relative to that of nonrural milieu upon fertility has increased since the middle of the last century. At least the excess of the 3 most rural over the 3 least rural groups of departments with respect to marital fertility has risen since 1857-61; the corresponding excess for gross reproduction was greater in 1931 than the analogous excess for general fertility in 1896. The corresponding excess for natality, negative about 1860, became positive after 1900.

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[58] Rural composition does not influence marital composition appreciably, if at all. If the departments are arranged in 9 groups running from that with the highest to that with the lowest percentage of women of childbearing age in the marital state, the average percentage rural by group runs as follows: 1861, 82.9, 80.9, 76.2, 80.6, 78.2, 72.6, 72.2, 82.9, 88.0; 1896, 76.2, 69.2, 70.2, 72.0, 66.4, 59.5, 69.5, 74.5, 78.9; 1931, 68.6, 63.5, 64.6, 59.4, 63.2, 55.7, 59.4, 62.5, 75.5. A study made in 1900 indicated that of the married males the percentage aged 20-35 by profession was: agriculture, 79.5; industry, 73.2; other groups, 69.4 (R. de Felice, *Les naissances*, p. 148). The average age at marriage, lower in rural than in urban districts for males and females in the nineteenth century (A. Legoyt, *Du progrès des agglomérations urbaines et de l'émigration rurale*, Marseilles, 1870, pp. 46-51, 67), therefore was lower for agriculturalists.

The failure of the preceding arrays to reveal that variations in rural-urban composition exercise an appreciable influence upon fertility may be caused by the fact that only extreme deviations from the national average rural-urban compositions have a relatively significant effect. Marital fertility in the 10 most rural departments expressed as a percentage of that in the 7-11 least rural departments was 109 in 1857-61, 129 in 1892-96, 128 in 1931; corresponding percentages for the 5 most and 5 least rural departments were 128, 155, 152. Analogous comparisons with respect to general fertility, gross reproduction, and children per family yield similar results. In sum, it may be said that an extremely rural composition of population is much more favorable to fertility than an extremely urban composition.

The materials obtained in the Census of 1906 indicate much variation in family size from occupation to occupation,[59] ranging from a maximum among workers to a minimum among employés. Among proprietors, whose over-all average lay in-between those of workers and employés, family size ranged from a maximum in industry to a minimum in the liberal professions. Families were largest among workers living in the country or in industrial agglomerations consisting essentially of persons of the same class; lowest among artisans engaged in small-scale enterprise, or living in cities. The size of worker families was influenced also by the abundance of employment and the availability of adequate housing. Families were small among those engaged in clerical work, public service, and domestic and personal service. In 1911 the differentials prevailing were similar to those existing in 1906 (see Table XI).[60] The data for 1926 (Table VIII) indicate that employés remained the least fertile and that family size among workers apparently no longer exceeded that among proprietors as in 1906 and 1911.

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[59] See Table VIIII; also *Statistiques des familles* (1906), pp. 2-8. Since data on marital composition by occupation are not given, a complete picture of occupational variations in natural increase is not given. Celibacy and deferment of marriage were especially evident among military and naval officers (*ibid.*, pp. 24-26; *R.p. et p.*, LXXVII, 1913, 66). Childlessness varied from subgroup to subgroup comprising the broad occupational groups, ranging from 2.8-5.6 to 11.2-12.6 per cent by subgroup within the broad patron, employé, and worker groups (*Statistiques*, pp. 35-37). Infant and child mortality was greater, other things equal, in worker than in employé families (*ibid.*, pp. 7-8).

TABLE XI. SURVIVING CHILDREN PER MARRIED COUPLE IN 1911
(Age of Family Head: 60 Years and Over)

Occupation	Rank		
	Proprietor	Employé	Laborer
Agriculture	264	...	282
Industry	255	234	267
Commerce	224	192	...
Liberal Profession	207	209	...
Public Service	...	212	260
Domestic Service	...	...	204
All	259	209	270

Correlation of departmental indices of fertility with departmental indices of socio-economic conditions reveals no consistent positive or negative relationship between fertility by department, on the one hand, and per capita saving, industrial investment, and certain occupational characteristics on the other. The absence of a significant relationship may be due either to the *real* absence of such relationship, or to counterbalancing effects of other conditions not rendered constant by department.

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[60] From Huber, *op. cit.*, p. 38; see also H. Clément, *La dépopulation en France* (Paris, 1910), pp. 117-19, on fertility among employés and government workers.

If the departments are classed into 9 groups of 10 each, ranging from that group in which the average of the amount of savings (in *caisses ordinaires* and *caisse nationale d'épargne*)[61] per inhabitant by department is at a maximum to that group in which the average is at a minimum, the averages (in 1931) of gross reproduction rates are as follows: 1.088, 1.120, 1.179, 1.127, 1.188, 1.131, 1.269, 1.214, 1.225. While gross reproduction is appreciably higher in the three groups of departments ranking lowest in per capita saving, the relationship is not consistently inverse throughout. Although this relationship may signify that "foresight" is less pronounced in departments where gross reproduction is high, it also reflects the fact that saving is more difficult, other things equal, when the number of non-producing dependents is relatively high.

When the departments are grouped on the basis of the percentage of employed males engaged in agriculture, ranging from highest to lowest, gross reproduction rates are: 1.176, 1.161, 1.239, 1.229, 1.060, 1.156, 1.231, 1.236, 1.086. The relationship is not consistent, gross reproduction falling most below the average in the not so urban middle group and in the highly urban last group. Given an array running from highest to lowest in percentage of employed persons engaged in commerce, domestic service, and the liberal professions, average gross reproduction rates are: 1.004, 1.223, 1.194, 1.219, 1.204, 1.167, 1.262, 1.178, 1.102. Gross reproduction is at a level much below the average only in the highly urban first group, averaging only 0.844 in the 6 (highly urban) departments with over 30 per cent of all employed persons engaged in the designated occupations; it is comparatively low also in the two last groups wherein there are but four departments with rates of 1.2 or higher. Given an array running from highest to lowest in percentage of employed persons engaged in industry, average gross reproduction rates are: 1.199, 1.180, 1.153, 1.181, 1.077, 1.154, 1.232, 1.153, 1.221. The relationship is not consistent. However, gross reproduction averages 1.307 in 6 departments with 59 or more per cent engaged in industry, and 1.127 in the

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[61] For savings data see J. Denuc, *Bulletin*, S.G. (July-Sept., 1937), p. 672.

5 with less than 18 per cent so engaged. When departments are classed in groups ranging from highest to lowest in per capita *contribution foncière* on *valeur locative* of *usines*, average gross reproduction rates are 1.198, 1.200, 1.122, 1.246, 1.060, 1.189, 1.201, 1.181, 1.221. Gross reproduction is on nearly the same level in two extreme and two intermediate groups. When the departments are grouped according to per capita *contribution mobilière* on *valeur locative réelle* in commerce and industry, gross reproduction rates are:[62] 1.150, 1.198, 1.200, 1.120, 1.121, 1.188, 1.210, 1.232, 1.081. The relationship is not consistent. However, gross reproduction averages 1.245 in the 10 relatively nonurban of the highest 13 and but 1.089 in the 5 lowest, indicating that the presence of favorable opportunities for employment are relatively conducive to procreation.

Variations in fertility by department correlate somewhat with variations in the ratio of proprietors and employés to other categories of employed, but not with variations in the relative number of females who are gainfully employed. Given an array of groups ranging from highest to lowest in the relative number of proprietors and employés in the active population, average gross reproduction rates are: 1.104, 1.170, 1.123, 1.207, 1.188, 1.181, 1.198, 1.134, 1.251. When the 5 very urban departments are excluded, the rates for the last three groups become 1.249, 1.262, 1.291. Accordingly, while there is no consistent inverse relationship, gross reproduction is highest in departments with relatively few proprietors and employés. Given an analogous grouping running from highest to lowest in the percentage of females gainfully employed, gross reproduction rates are: 1.159, 1.254, 1.145, 1.179, 1.204, 1.160, 1.153, 1.115, 1.192; legitimate births per 1,000 married women, 15-49, 106.1, 119.3, 106.9, 109.6, 111.9, 106.8, 105.6, 99.5, 108.0. The rates in the two last groups become 1.156 and 102.6, 1.274 and 116.7, when the extremely urban departments are eliminated. No consistent relationship exists, high fertility being associated with both a high and a low percentage of females employed.

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[62] See *A.S.*, XLVII (1931), 246-47, for data on revenues.

Given a community in which knowledge of contraception is widely diffused, fertility by region should correlate positively with the average level of per capita income, the coefficient of distribution of income being assumed not to vary widely. French data by department for fertility and wealth are not inconsistent with this proposition. Given a grouping of departments running from highest to lowest and based on per capita income by department in 1929, as measured by all "*bénéfices et revenus soumis aux impôts cédulaires*,"[63] average gross reproduction rates are: 1.035, 1.221, 1.188, 1.221, 1.185, 1.207, 1.216, 1.138, 1.146. The rate in the first group becomes 1.241 if the 5 extremely urban departments are excluded. It appears that while there is no consistent positive relationship between income and fertility, a low level of fertility is found in departments where income levels are extremely low. Given an analogous array running from highest to lowest in per capita value of successions, average gross reproduction rates are: 1.115 (1.27 if 3 urban departments are excluded), 1.321, 1.217, 1.091, 1.198, 1.242, 1.071, 1.113, 1.181. Given an array based upon the number of successions per 1,000 inhabitants,[64] gross reproduction rates are: 1.242, 1.219, 1.249, 1.198, 1.012, 1.191, 1.225, 1.137, 0.827. The rate for the 15 lowest departments, exclusive of 4 urban departments, is 1.114. The data on successoral value and successions indicate, as did the data on per capita income, that gross reproduction is appreciably higher in the wealthy but not extremely urban departments than in the departments where poverty prevails. There is not a consistent positive relation between wealth as measured by successions and gross reproduction.

The relationships noted between fertility by department and certain socio-economic conditions are confirmed in part by a comparison of the conditions in departments in which fertility has declined least with those in departments in which fertility has declined most. Between 1911 and 1931, 24 departments experienced an increase in gross reproduction; 22 experienced a decline of 15 or more per cent. The average ranks of all

[63] Computed from data given in *A.S.*, XLVII (1931), 256-57.

[64] For successions by departments see *A.S.*, XLVII (1931), 240-43.

departments among the 24 gainers and the 22 extreme losers respectively were as follows in respect to the following socioeconomic conditions: per cent urban, 44.7, 48.2; per cent active males in agriculture, 46.8, 42.3; per cent women of childbearing age married, 26.4, 62.7; per cent active population in industry, 45.2, 53.6; per cent foreign, 43.3, 43.9; per capita savings, 49.3, 52.5; per capita successoral value, 27.3, 59.8; per capita income, 27.5, 58.0. The 22 losing departments include 4 extremely urban departments. When these are excluded the average rank of the remaining 18 becomes: urban, 59; agriculture, 31.4; married, 66; industry, 63.1; foreign, 53.3; savings, 54.9; successoral value, 70.4; income, 72.1. The level of gross reproduction in 1911 was very much higher among the 22 losers than among the 24 gainers. Comparison of the ranks of the losers and the gainers indicates that per capita wealth is much higher among the gainers; that, especially when the extremely urban departments are excluded, industrialism is more pronounced, agriculture less pronounced among the gainers. Marital composition is much more favorable among the gainers. In sum, greater wealth and income per capita seem to be associated with industrialization; and greater frequency of marriage and higher gross reproduction with greater wealth and income. With the spread of contraceptive information the tendency of the population living in regions of high fertility and low income to limit the number of dependents has become quite pronounced, at least relative to changes in this tendency in departments with low fertility and high income.

Between 1895-96 and 1931 fertility (births per 1,000 women 15-45) increased in 14 departments; it decreased 29 or more per cent in 14 departments, 3 of which are extremely urban. We give as in the preceding paragraph the respective average ranks for each of the two groups and in parentheses the rank of the 11 nonurban of the 14 losers: urban, 56.6, 43.4 (54.3); per cent active males in agriculture, 32.5, 37.4 (24.5); per cent women of childbearing age married, 31.7, 58.5 (60.6); per cent active persons in industry, 50.4, 56.0 (66.4); per cent foreign, 49.7, 43.5 (52); per capita savings, 55.5, 47.9 (49.1); per capita successoral value, 35.4, 57.7 (70.5); per capita income, 45.6, 59.8 (74.8); illiteracy, 52.4, 39.4 (33.7); per cent native population born outside of department, 34.5, 56.3 (70.8). Again the most pronounced difference between the two groups consists in per capita wealth as measured in terms of income and successoral value. The gainers rank much higher in wealth. Moreover, as the rank in natives born out of department indicates, economic conditions are considered less oppressive in departments where fertility has risen. Among the gainers marital composition is much more favorable to fertility, illiteracy is less frequent, savings are slightly greater, the number of foreigners is virtually the same (when the three urban departments are excluded). If the three urban departments are ignored, rank in urban composition is virtually identical, but employment in agriculture is somewhat less, employment in industry somewhat greater among the gainers.

The respective average ranks among the 15 departments wherein marital fertility declined relatively least between 1892-96 and 1931 and among the 21 wherein it declined relatively most are as follows: urban, 58.5, 47.5 (65.4);[65] per cent active males in agriculture, 39.4, 40.6 (26.3); per cent active population in industry, 53.5, 54.0 (65.3); per cent foreign, 54.2, 42.0 (52.8); per capita savings, 59.5, 50.2 (52.3); per capita successoral value, 37.5, 59.0 (71.2); 51, 57.1 (73.3); marital composition, 33.4, 62.1 (66.9). When the 5 urban departments are excluded from the 21 experiencing the greatest relative decline, it becomes evident that wealth is greater and marital composition much more favorable among the 15 experiencing the least relative decline. The 16 less urban losers are somewhat more rural and agricultural than the 15 experiencing relatively the least decline. The two groups do not differ appreciably with respect to savings or relative number of foreigners.

The implication of certain of our data, namely, that fertility and wealth are in part positively correlated, is not thoroughly testable because of the nonavailability of sufficient data. Such a relationship has been observed in Russia, Germany, Sweden, and the United States for circumscribed groups.[66] It has been observed too in France, but only with respect to small groups. In 1913 Leroy-Beaulieu wrote:

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[65] In parentheses are the ranks for the 21 greatest losers when the 5 urban departments are excluded.

> We believe that in France notably, there are more children in the quite high bourgeoisie and in the old aristocracy than among the lower bourgeoisie, the peasants of the Burgundian or Gascon departments, and even among the artisans, the foremen, and the workmen of the élite.[67]

M. de Roux concluded from income tax returns that nuptiality and large families were relatively more frequent among those with incomes of 25,000 or more francs than among those with incomes of 5,000-10,000 francs.[68] L. Naudeau concluded, following a survey of conditions in various departments, that natality was highest among the "*grands bourgeois catholiques*" and in groups clinging to the faith of the past or hopeful concerning the future.[69] Cauchois reached a similar conclusion.[70]

The census returns on family size by occupation reveal little relative to the relationship between wealth and fertility. Data obtained in 1906 revealed an inverse relationship on the whole. Among public service workers, married 25 or more years, family size was greater, childlessness less frequent, among those earning 500-1,000 francs than among those earning 1,500-4,000 francs. Not until the salary level rose above 10,000 francs was an increase in family size associated with an increase in income. In each income group family size was greater among workers than among employés. Among female employés both celibacy and childlessness, which rose with the level of income, were appreciably greater than among female workers.

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[66] E.g., see K. A. Edin and E. P. Hutchinson, *Studies of Differential Fertility in Sweden* (London, 1935); F. Burgdörfer, *Bevölkerungsfrage und Steuerreform* (Berlin, 1930); F. Lorimer and F. Osborn, *Dynamics of Population* (New York, 1935), chap. iv; Pierreville, *op. cit.*, p. 31; C. V. Kiser, *Milbank Fund Quarterly*, XVI (1938), 48-56.

[67] *La question*, pp. 399-400.

[68] *L'état et la natalité* (Paris, 1918), pp. 36-37.

[69] *La France se regarde* (Paris, 1931), pp. 416-17.

[70] *Op. cit.*, pp. 61, 79-80, 86-88, 326-28.

In general, within similar milieus both workers and employés with higher incomes had fewer children than those with smaller incomes.[71] The averages given in Table VIII reveal larger families among the higher income groups only in the sense that families appear to be larger among some groups of proprietors than among laborers. Families are smaller, however, among employés than among laborers, and among laborers in some occupations than among employés in others. Carefully tabulated data on age, marital, occupational, and income data are prerequisite to a determination of the influence of income, other things equal.

The materials thus far presented throw little light upon trends in fertility differentials. Although the occupational composition of the census of 1926 is not directly comparable with that of the census of 1906, comparison indicates both accentuation and reduction of differentials recorded in 1906. In 1926 the proportion of married persons without profession who had no living children was 4 per cent greater than the proportion of married rentiers and persons without profession who in 1906 had never had children; the proportion with 1-2 was 29 per cent greater than in 1906; the proportions with 3-4 and 5 and over were respectively 10 and 51 per cent less. In 1926 the proportion of heads of business establishments who had no living children was 17 per cent greater than the proportion of married proprietors who in 1906 had had no children; the proportion with 1-2 was 32 per cent greater in 1926; proportions with 3-4 and 5 and over were respectively 14 and 61 per cent less. Analogous comparisons for employés and workers indicate that childlessness was 25 and 31 per cent greater respectively in 1926 than in 1906; families of 1-2, 17.5 and 31 per cent greater; families of 3-4 children, 40 and 23 per cent less; families of 5 and over, 71 and 62 per cent less.[72] Apparently fertility declined relatively most among employés, already very infertile in 1906, and among workers, somewhat more fertile in 1906 than proprietors and considerably more fertile than rentiers.[73]

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[71] *Statistiques des familles* (1906), pp. 6, 45-46, 48-49, 70, 75, 79; also *Metron*, IV (1924), 572.

[72] Calculated from *ibid.*, pp. 108 ff.; *A.S.*, XLVII (1931), 15.

In 1911-26 there occurred a decline in fertility in nearly every occupational category, ranging from +0.6 per cent in the liberal professions to 10.2 in industry, transportation, and manufacturing. The average number of surviving children per family head by occupation was as follows in 1926 and 1911 respectively: without profession, 2.10, 2.15; fishermen, 2.42, 2.48; forestry and agriculture, 2.31, 2.43; industry, transportation, and manufacturing, 1.85, 2.06; commercial and clerical, 1.57, 1.72; liberal professions, 1.54, 1.53; domestics, 1.54, 1.67; public services, 1.66, 1.73; all professions, 1.96, 2.13.[74] Inasmuch as the census does not give the age composition of each occupational group for each year, and since the composition of the occupational groups for the two years is not always identical, it is impossible to ascertain whether there has been a real convergence of children per family by occupation.

It seems, however, that fertility has declined more in the employé and laboring classes than in the business proprietor class. In 1906 and 1911, respectively, "patrons" averaged 2.17 and 2.29 surviving children per family; in 1926, "proprietors" averaged 2.25. Corresponding averages for employés were 1.58, 1.50, 1.38; for laborers, 2.15, 2.11, 1.88. The percentages of decline in 1906-26 for analogous classes are: "proprietors," +3.7 (−1.7 in 1911-26); employés, −12.7; laborers, −12.6. It is improbable that these differences in percentage decline or those indicated in Table XII are attributable to changes in age composition. Both the decline and the variations in decline reflect changes in fertility per se.[75] Contrary to the arguments of some writers, the laboring classes seem to be experiencing a greater increase in social pressure than the proprietor classes, and nearly as great social pressure as the employés, in so far as fertility is concerned.[76]

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[73] In 1919 a study of 99,000 Paris workmen indicated that of the 63 per cent married, 10.5 per cent had over two children, 38.4 had none, 51.1 had 1-2. See *Journal of American Statistical Association* (Sept., 1924), pp. 318-19. In 1922 a study of 16,000 persons revealed 40 per cent of the workers childless, 49 per cent with 1-2 children, 11 per cent with 3 or more; among employers 49 per cent were childless, 44 had 1-2 children, 6 had 3 or more. See G. Dequidt, *Le statut des familles nombreuses* (Paris, 1922), pp. 10 ff.

[74] *Statistiques* (1926), p. 26.

[75] Data for 1911 and 1926 adapted from *Statistiques des familles* (1926), pp. 31, 33; for 1906, from *Statistiques des familles* (1906), p. 38. In 1906 fishermen, sailors, persons in the army and navy, and persons "without profession" were not included among "patrons," employés, and laborers.

TABLE XII. NUMBER OF SURVIVING CHILDREN PER MARRIED FAMILY HEAD CLASSIFIED AS TO ECONOMIC RANK AND OCCUPATION IN 1911, 1926

Economic Rank	Proprietors			Employés			Laborers		
Occupation	1911	1926	Per Cent Change	1911	1926	Per Cent Change	1911	1926	Per Cent Change
Agriculture	2.42	2.35	— 2.9	....	1.81	....	2.25	2.02	—10.2
Industrial	2.13	2.00	— 6.1	1.63	1.48	— 9.2	2.05	1.87	— 8.8
Commercial	1.82	1.67	— 8.2	1.35	1.24	— 7.3	....	1.60	....
Liberal Professions	1.65	1.82	+10.3	1.44	1.35	— 6.2	....	1.70	....
Public Services	....	....	....	1.58	1.39	—12.0	2.09	1.93	— 7.7
Domestic Services	....	....	....	....	....	....	1.63	1.58	— 3.1

Materials prepared by L. Hersch indicate that the inverse relationship by arrondissement between fertility and wealth in Paris, so pronounced in the 1890's, became less striking in 1911-28, when natality fell relatively more in the rich than in the poor arrondissements.[77] Hersch's evidence (see Table XIII) indicates that natality was lowest both in 1911-13 and 1924-28 in the three wealthiest arrondissements, Class I, comprising

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[76] A. Jules contends (*Revue internationale de sociologie*, XXXVII, 1929, 401-10) that since the "middle class," the source of invention and the carrier of special mores (patriotism, familial responsibility, etc.) is encountering increasing social pressure and competition and as a consequence is being threatened with extinction, financial measures must be adopted to preserve this class.

[77] In 1886-95 births per 1,000 women aged 15-50 rose from 35 in the richest Parisian arrondissements to 108 in the poorest; legitimate births per 1,000 married women of childbearing age, from 69 in the richest to 140 in the poorest. See J. Bertillon, *Dépopulation*, p. 103. Leroy-Beaulieu reasoned, however, that rates of this sort did not prove the rich less fertile, since at least 90 per cent of the population of the rich arrondissements consisted of tradesmen, domestics, etc., whose fertility determined the fertility of the arrondissement (*La question*, pp. 399-400). Bertillon's rates above may indicate merely that persons in close contact with the upper classes curtailed natality relatively more than those not in such close contact. Levasseur concluded (III, 170) that wealth exercised a more depressive effect upon natality than irreligion, inasmuch as natality was lower in arrondissements inhabited by relatively many wealthy but pious persons than in arrondissements inhabited by poor but irreligious workers.

TABLE XIII. BIRTH RATES IN PARIS BY ARRONDISSEMENTS CLASSED ACCORDING TO ECONOMIC STATUS

Classes of Arrondissements	Live Births per 1,000 Inhabitants Aged 20-39 Years		B-A	B/A
	1911-13 A	1924-28 B		
I	25.5	32.6	+7.1	1.28
II	31.8	33.3	+1.5	1.05
III...........	42.4	38.4	—4.0	0.91
IV...........	56.7	46.8	—9.9	0.83
Paris..........	40.5	39.5	—1.0	0.98

relatively the largest number of personal property taxpayers; natality was highest in the group of arrondissements, Class IV, comprising relatively the smallest number of taxpayers. Between 1911-13 and 1924-28, however, a convergence of natality took place, the rates rising in the two wealthy classes of arrondissements and falling in the two poorer.[78]

The convergence of natality noted in the preceding paragraph apparently did not really begin until the present century. The percentage declines between 1866-69 and 1876-85 in the arithmetic average of the crude birth rates in the arrondissements composing I, II, III, and IV, respectively, approximated 18.0, 8.0, 16.9, and 6.1; between 1876-85 and 1890-95, 2.2, 7.4, 10.5, and +0.3; between 1890-95 and 1911-13, 35.6, 35.4, 31.9, 30.5.[79] Between 1866-69 and 1911-13, the average of rates in I-III fell 45-49 per cent; in IV, 35 per cent. The lack of convergence is probably due in part to changes in the social composition of the arrondissements and in the extent to which births were misallocated; it must be due in part, however, to the fact noted earlier in this paper that in the present century the size of families in the working classes began to decline more rapidly than that of families in other than the employé classes.

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[78] The data in this table are given by L. Hersch, *Proceedings*, VIII, 105 ff.; *R.d.e.p.*, XXXIV (1920), 273-302, 447-66. Data in the latter article show that in 1911-13 crude mortality ranged from 11.4 in Class I to 21.6 in Class IV. Infant mortality ranged from 51 in I to 151 in IV; infant mortality among illegitimates from 73 in I to 182 in IV. Deaths caused by tuberculosis ranged from 1.48 per 1,000 persons in I to 5.86 in IV. Still births were slightly above average in III and IV. Natural increase per 1,000 inhabitants was 0.4 in I, 1.2 in II, 1.0 in III, 0.8 in IV. In short, the higher mortality in the poor arrondissements counterbalanced their higher natality. In 1929 crude natality exceeded crude mortality only in IV. In 1890-95 crude natural increase was highest in II, lowest in IV, infant mortality in IV (about 259) exceeding by three-fifths that in I (Meuriot, *op. cit.*, pp. 371, 383; also Levasseur, II, 403-04). In general, there is a strong positive correlation between poverty and both general mortality and infant mortality (Pierreville, *op. cit.*, chap. iv). L. March, who found that in France infant mortality rose with order of birth, nearly twice as many eighth born perishing relative to births eighth in order as first born, implied that not only the poverty of goods and care but also the psychological attitude of parents with many children explained this higher rate. See *J.R.S.S.*, LXXV (1912), 514, 520, 525.

The convergence no longer seems to be going on, however. Between 1911-13 and 1929 the arithmetic average of crude natality by arrondissement fell 0 per cent in I; 8.5 in II; 11.3 in III; 19.9 in IV; 5.9 in I+II; 9.4 in 5 arrondissements especially poor in 1935. Between 1929 and 1933-34 the average of crude natality by arrondissement in the corresponding areas fell respectively 21.9, 23.2, 19, 4.7, 23, 21.1. For Paris as a whole crude natality fell 14 per cent in 1911-13-1929, 15.3 in 1929-1933-34.[80] Although these averages are unweighted and do not allow adequately for changes in age composition or for internal population shifts, they suggest that natality in the richer districts is declining as rapidly as, if not more rapidly than, natality in the poorer districts. These trends do not necessarily prove that fertility is falling more rapidly among the wealthy than among the poor, for natality in the wealthier districts is influenced by the decline in the natality of the non-wealthy inhabitants thereof.

The main conclusions derivable from the materials presented in this chapter follow:

1. Natality and fertility have declined appreciably in every department, low natality blanketing the country in an ever increasing degree.
2. Primarily as a result of (1) the number of departments in which deaths exceed births has increased, nearly two-thirds of the departments now showing both such an excess and a *true* rate of natural decrease.

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[79] For rates see Levasseur, II, 407; Meuriot, *op. cit.*, p. 371; Hersch, *loc. cit.* The approximate averages of rates in I, II, III, IV were 21.7, 24.9, 34.3, and 33 in 1866-69; 11.0, 13.7, 17.5, and 21.6 in 1911-13.

[80] Rates computed from Pierreville, *op. cit.*, pp. 27, 186.

3. A few departments which formerly ranked high in terms of natality, now rank low; and a few which formerly ranked low, now rank high.
4. While there has been some tendency for indices of reproduction to decline more rapidly in high-level than in low-level departments, and while the relative spread between high- and low-level areas has diminished, the phenomenon of convergence did not become significant until the present century.
5. Variations in local cultural milieu exercised an appreciable influence upon fertility by locality, other things equal, in the nineteenth century. Presumably, with the increasing homogeneity of cultural pattern, the effect upon differentials of this natality-influencing factor has diminished.
6. Changes in the socio-economic composition of the French population have depressed natality.
7. Deficiencies in the data available make it difficult to determine with precision the extent of fertility differentials, or the exact causes thereof.
8. The data pertaining to fertility differentials support in whole or in part the following conclusions:
    (a) Differentials in fertility have prevailed in France throughout the periods for which data are available.
    (b) Whatever be the effect of differentials in education per se upon fertility, there no longer exists a positive correlation between illiteracy and family size by region.
    (c) Religious piety and high natality appear to be positively correlated.
    (d) Other things equal, fertility has been somewhat higher among foreigners than among the French; it tends to approach the French level, however.
    (e) Other things equal, natality has been greater in the rural and agricultural population than in the nonrural and the nonagricultural population, nearly all if not all net natural increase since 1887 being ascribable to the rural population. The relative spread between rural and nonrural indices of fertility apparently has been less in France, however, than in other lands. That a rural as compared to an urban milieu is more favorable in France at present than formerly is suggested by an

increase in the relative spread between fertility in the most rural and the most urban regions.

(f) Although natality was inversely related to wealth in the nineteenth century, data on regional variations and trends suggest that the relationship may be positive today.

(g) Fertility by occupation has varied and does vary considerably today, although possibly in a lesser degree than formerly.

(h) Although fertility varies with occupational status, there has been some convergence in the present century, fertility among employés and laborers declining most, that among proprietors least.

(i) Fertility by region in Paris began to converge in the present century, only apparently to cease converging after 1929.

(j) In the nineteenth century marital fertility by region varied inversely with the proportion married, regional populations choosing apparently to limit numbers either through voluntary control or through deferment of marriage. This relationship still prevails, although not in so marked a degree; moreover, departments in which the proportion of women married is relatively high have experienced, on the average, a lesser decline in general and marital fertility than departments in which the proportion is relatively low.

CHAPTER V

DEPOPULATIONIST FEARS: REPOPULATIONISM (1400-1870)

THE POST-1800 trends in natality and national and regional population growth, described in the preceding chapters, began to give rise, in the middle of the nineteenth century, to alarm lest France's slow growth cost her political and military hegemony on the Continent and palsy her economic expansionist tendencies. As this alarm grew and spread, neo-mercantilistic and anti-Malthusian population theory came back into vogue, and publicists, legislators, and social scientists set themselves to discovering means whereby French population growth might be stimulated and the political effects of a declining rate of natural increase might be counteracted. In this and the ensuing chapter we shall sketch the development of the fear of depopulation, contrast it with the similar fear that was manifest in the preceding century, and describe the tenets composing the neo-mercantilistic population theory.

Concern over depopulation, although essentially a late nineteenth-century phenomenon in France, was not unprecedented, having manifested itself in the eighteenth century and, at times, even prior to the eighteenth century. For with the decline in the immediate relative importance of other-worldly values and the development of the French national state, both statesmen and publicists emphasized the advantages of population growth. In the sixteenth, seventeenth, and early eighteenth centuries—centuries of national consolidation and expansion and struggle among the "rival commercial Empires of Western Europe"—populousness and population growth were looked upon in France as sources of national economic and political strength. Various measures were proposed to stimulate natural increase, promote immigration, and check emigration, it being generally accepted that nuptiality, natality, and migration were susceptible of control and stimulation. A number of measures were put into effect at various times.

Concern over depopulation first showed itself in France in the late fourteenth and fifteenth centuries, when, as we have seen, numbers were greatly reduced by the Black Death, by the campaigns and destruction attendant upon the Hundred Years War, and apparently by emigration. Many local ordinances, chiefly in the form of tax reductions and measures favoring the establishment of fairs and markets, were taken between 1379 and the late fifteenth century to promote marriage and immigration.[1] Extensive attention was not again given to the promotion of population until the ministry of Colbert, even though the religious wars in the late sixteenth century directly and indirectly diminished population. Upon the termination of Colbert's ministry his population-promoting program was virtually discontinued and a series of royal acts (war, taxation, religious persecution, etc.) was initiated which increased the misery of the people, stimulated emigration and the positive checks, and brought about a decline in numbers.[2] Out of this situation, which prevailed until the death of Louis XIV, developed the eighteenth-century belief that France was suffering from depopulation.[3]

By the middle of the eighteenth century it was generally believed in France that the population was growing slowly if at all,[4] and that it was smaller than in preceding centuries. This opinion, which was made much of by the critics of prevailing governmental policies, developed after the critical works of Fénelon, Vauban, and Boisguilbert suggested that population growth was being retarded by continuous warfare, by the inequitable tax system, and by the neglect of agriculture.[5] Montesquieu's contention that the checks to population had multiplied and that the world was only one-tenth as densely populated as in ancient times[6] helped to strengthen and popularize the belief that France was less populated than formerly, as did his later reassertion of the above views and his acceptance of Puffendorf's statement that France contained 20 millions in the reign of Charles IX (1560-74).[7] Montesquieu's general view was made specifically applicable to France by those of his contemporaries who asserted that France's population was less in the eighteenth than in earlier centuries,[8] or that mid-eighteenth century France contained only 12-18 millions, in contrast to the 19-20 millions assigned to France as of 1700 by Vauban;[9] the belief in depopulation was strengthened too by the publications of Abbé Jaubert and F. de Villeneuve, of agrarian writers such as Goudar, and of the Physiocrats. The last, anxious to show the need for agricultural reform, eagerly accepted low estimates, attributing their lowness to agricultural ills and urging that France could support 23-30 millions. Quesnay, whose opinions enjoyed the greatest weight, selected 16 millions as the proper estimate for 1755, saying that the population had numbered 24 millions in 1650, 19½ in 1701, and 15½ in 1715, and that the decline in numbers had been due primarily to war and the deterioration of agriculture.[10]

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[1] Schöne, chaps. vi-vii.

[2] *Ibid.*, chaps. viii-x.

[3] The material in the following pages and the theories prevalent in France are treated fully in the writer's forthcoming study, "Pre-Malthusian Population Theory in France."

[4] Concerning the widespreadness of this belief see Messance, preface; Moheau, pp. 62, 249, who characterized it as unfounded; and Baron Frederick Grimm, *Correspondence* (Paris, 1813), Part I, V (Oct., 1766), 316.

[5] See F. Fénelon, *Les aventures de Télémaque* (1697); S. Vauban, *Dixme royale* (1707); H. Roberts, *Boisguilbert* (New York, 1935); Duc de Saint-Simon, *Mémoires,* XII.

The belief that France's population was diminishing, or had diminished greatly since the fourteenth century, was dissipated in the closing quarter of the eighteenth century by appeals to fact and theory. Messance in 1766 and Moheau in 1778 demonstrated, as did subsequent writers, that births and population were increasing. Voltaire, in replies to Montesquieu, D'Amilaville, and others, asserted that since conditions were better than formerly, population must be greater.[11] Chastellux argued in a similar vein.[12] Forbonnais, in a criticism of the Physiocrats, asserted that France had a population of 19 to 20 millions.[13] Several economists projected an estimated or observed rate of natural increase into the future to determine the future population of France, thus implicitly rejecting the view that France's population was growing very slowly.[14] The theorists simply maintained that since subsistence had increased, population must have increased.

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[6] *Lettres persanes* (1721), Letters 112-23.

[7] *L'esprit des lois* (1748), English translation (Glasgow, 1793), II, Book XXIII, p. 123. About this time the Abbé de Saint-Pierre, perhaps the leading proponent of the theory of progress, estimated that the population of France required twelve hundred years in which to double. See G. de Molinari, *L'abbé de Saint-Pierre, sa vie et ses œuvres* (Paris, 1857), p. 185.

[8] E.g., J. B. Dubos, *Histoire critique de l'établissement de la monarchie française dans les Gaules* (1742 ed.), I, Book I, chap. xiv; D'Amilaville, "Population," in Diderot's *Encyclopédie* (Neufchâtel, 1765), XIII, 90.

[9] Dupré de Saint-Maur estimated population at 12 to 13 millions (*Essai sur les monnaies*, 1746, pp. 24-25); C. J. Herbert (*Essai sur le police générale des grains*, Berlin, 1755, pp. 123, 127) at 16-18; Mirabeau (*L'ami des hommes* [1755] [1885 ed.], p. 209) at 18; Goudar (I, 11), at 17; Saint-Peravy (*Mémoire sur les effets de l'impôt indirect*, 1768, p. 233) at 16; Duhamel du Monceau (*École de l'agriculture*, 1759, p. 18, note) at 16 to 21; Dupont de Nemours (*Journal d'agriculture*, July, 1766, p. 118) at about 16.

[10] See article, "Hommes," first published in *R.H.S.*, I (1908), 7-8; G. Weulersse, *Le mouvement physiocratique en France* (Paris, 1910), II, 268-95.

The mid-eighteenth century belief that France was suffering from depopulation differs from that which became current a century later. All the writers who drew attention to the alleged depopulation of France found its cause primarily in the depressed condition of agriculture and industry and the consequent diminution of the means of subsistence. All were apparently agreed that given improvements in agriculture and industry—improvements easy to effect—population would grow. Even those who attributed the alleged decline in part to the operation of preventive checks believed that these checks would become less operative as conditions improved. The late nineteenth-century writers, on the contrary, correctly attributed the decline in the rate of natural increase to the operation of preventive checks. But they had no convincing reason to suppose that changed conditions, short of a complete transformation of society, would halt this decline.

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[11] See Voltaire *Oeuvres* (Beuchet ed., Paris, 1829), XV, 262; XXXI, 102, 474, 476, 481-82.

[12] *De la felicité publique* ([1772] Paris, 1822), pp. 140, 160-69, 176-78. Chastellux criticized Villaret (continuator of Abbé Velly's *Histoire de France*, 1755) for attributing a population of 32 millions to France as of 1328 on the basis of the enumeration of *feux*. The population did not then exceed 14 millions, said Chastellux, whereas in 1772 it approximated 23 millions.

[13] *Principes et observations économiques* (Amsterdam, 1767), I, p. 197.

[14] E.g., C. F. J. Auxiron, who estimated the maximum possible rate of natural increase at 3⅓ per cent per year, said that France's 16 millions would in 60 years grow to 64 millions, assuming propitious conditions. See *Principes de tout gouvernement* (Paris, 1766), I, 56-58. A. N. Isnard estimated that French agriculture would improve at a rate permitting the existing population of 24 millions to increase to 48 millions in a century. See *Traité des richesses* (London, 1781), I, 84-87.

The eighteenth century witnessed a decided change in French population theory. First, the early eighteenth-century view (e.g., of Fénelon, Vauban, Boisguilbert) that population growth depends in part upon the degree of prosperity and the availability of employment and subsistence was converted into the theory that population is governed by subsistence, the deficiency of which sets up positive or preventive checks to population growth. Whence it followed that population growth could not be stimulated by such measures as had been proposed or established in the past, but would develop in proportion as the "net product" was swelled, as industry and agriculture were promoted by the establishment of economic liberty and other measures allegedly favorable to progress in production. Second, those who wrote on population gradually discarded the earlier view of upper-class writers that the common man existed and multiplied merely to supply the "state" with revenues and military levies; they accepted instead the humanitarian view that men, as individuals, enjoyed such "rights of man" as happiness and self-improvement. Therefore these writers became increasingly unsympathetic to the population-promoting measures of the *ancien régime* and the motives lying back of such measures. Those who were inspired by the belief and hope in progress and recognized the influence of the standard of living upon the individual's attitude toward marriage and procreation saw in this standard a check to excessive population growth and a preserver of some of the anticipated fruits of economic progress.

During the first half of the nineteenth century the climate of economic and sociological opinion—itself the outgrowth of the late eighteenth-century opinions, of the influence of Malthus, and of the belief that France was crowded enough—was unfavorable to population-stimulating measures and unconducive to alarm at the comparatively slow growth of the French population or at occasional allegations that France's population was less than formerly. Therefore the allegations in the 1820's and 1830's of Dureau de la Malle and Guerard—allegations based upon the Polyptique of the Abbé Irminon and the document of 1328 referred to above—that France was densely populated in Charlemagne's time and more heavily populated in the fourteenth than in the nineteenth century produced little or no comment on part of economists and sociological writers;[15] nor did subsequent arguments to the effect that France's population had grown very little since 1789 and 1800. For, following Malthus and the French and English writers who had anticipated him, most French commentators upon the population problem held that population tends to grow automatically when production or subsistence grows and that undue population growth is the major cause of mass poverty. They therefore emphasized the need of restraining population and of augmenting the means of subsistence; condemned population-promoting measures and noneconomic arguments in support of population growth; advised the masses to be industrious and prudent, to defer marriage and limit family size sufficiently to enable parents to support children at a level of existence at least equal to that enjoyed by the parents prior to their marriage and their assumption of family burdens. Even the French critics of Malthus generally recognized implicitly or explicitly the need to prevent too great a rate of population growth. They differed from Malthus chiefly in their belief that through proper institutional reforms men could create a milieu within which population growth would be adequately restrained and national income would be adequately augmented and properly distributed.[16]

Early observations that the population was not growing appreciably in certain departments, and that the rate of natural increase was less in France than in other countries apparently aroused no alarmist comments.[17] Those writers who demonstrated statistically that France's population was growing less rapidly than that of other European powers,[18] or asserted that France's population had grown less than one-fifth since before the Revolution,[19] not only expressed no alarm at this slow growth but virtually found in it proof that France would remain free of population pressure and continue to witness an improvement in the lot of the masses.[20] It was apparently assumed as an accepted matter of fact that France's population would grow, but at a slow rate.[21]

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[15] See Levasseur, I, 135-36, 153, 155-58, for the evidence and argument offered by De la Malle and Guerard.

[16] See the writer's "French Population Theory Since 1800," *J.P.E.*, XLIV (1936), 577-631, 743-66.

[17] E.g., see Humboldt, *Nouvelle Espagne*, I (1823), cited by Levasseur, III, 184; also F. Corbaux who inferred (*Natural and Mathematical Laws*

Concerning Population, Vitality, and Mortality, London, 1833, pp. 144-45) that France's population was moving toward a stationary state; Louis Passy who, noting that the population of Eure had not increased between 1830 and 1862 (*J.d.e.*, 2d ser., XXXVI, 1862, 425), cited the comment of a writer who already in 1831 had noted a marked diminution after 1810 in the size of the families of the well-to-do; J. S. Mill, who commended the French for having the "slowest" rate of increase in Europe and attributed the lowness of this rate to the system of peasant proprietorship (*Principles of Political Economy*, Ashley ed., pp. 292-96).

[18] E.g., M. Schnitzler in the 1830's (Levasseur, III, 212, note); A. Moreau de Jonnes, *J.d.e.*, 1st ser. (1842), I, 161-72. Schnitzler, who fixed the annual rate of increase at one-half per cent, said France had achieved her growth in the past and could not therefore grow so rapidly as "badly peopled" countries or countries with great foreign possessions and commercial prosperity. In 1852 De Jonnes, noting that France's population required 300-400 years in which to double, saw in their ability to increase despite war and pestilence evidence of the *vie forte* of the French people. See *A.s.m.p.*, XXI (1852), 191-92. Although he made no comment on the changing demographic equilibrium in Europe, revealed in his *Éléments de statistique* (Paris, 1856), De Jonnes did say in 1850 that France's geographical location was less strategic than that of Great Britain and that one of the powers of Europe was growing much more rapidly. See *A.s.m.p.*, XVII (1850), 43.

[19] It was asserted that France already had a population of 30-31 millions in 1784-89 and 1800, that therefore the French population was growing at a rate which would permit it to double but once every 300 years. For proponents of this view see next footnote. For later criticism see Levasseur, I, 217, note; III, 526-31.

[20] See M. Fayet, *J.d.e.*, 1st ser. (1845), XII, 216-35; C. Juglar, *ibid.*, XXX (1851), 367-80; XXXII (1852), 54-77. For contemporary criticisms of the statistical evidence of Fayet and Juglar, see *A.s.m.p.*, VIII (1845), 510-13; IX (1846), 88-89, 517-25. Only C. M. Raudot, who anticipated Fayet's argument (*La France avant la révolution*, 1841, 1847), refused to draw an optimistic conclusion. See below concerning Raudot.

[21] In 1834 Mathieu de Dombasle, advocate of tariff protection for French industry, although fairly optimistic with respect to France's future, predicted that by 1955 France's population would have slightly more than doubled. See G. Schelle, *R.H.S.*, VII (1914), 99. Given efficient use of her resources, France could support treble her then population, Louis Say observed in 1837. See *Y a-t-il insuffisance ou excès de population en France?* (Paris, 1837), pp. 14-15, 24.

In general, with the exception of certain Catholic and anti-capitalistic[22] economists, most French economists saw in France's slow demographic growth evidence of her well-being, of the soundness of her culture and morals. The liberal economists looked with positive disfavor upon a high rate of natural increase and counselled the masses to emulate the prudence of the Normans, whose numbers were growing most slowly of all.[23] This point of view was well represented by A. Legoyt, chief of the Statistique générale, who, noting that the absolute number of births had declined despite an increase in the population and in the annual number of marriages,[24] observed in 1847 that countries marked by the greatest population growth (e.g., England, Prussia, Saxony) were "precisely those where pauperism makes the most redoubtable progress."[25] He stated, further, that France's low natality was evidence of the

> progress of the spirit of order and foresight among [French] families. It is, besides, the anticipated consequence of our civil and social institutions which, in bringing about each day a greater subdivision of the territorial and personal fortune of France, develop in the breast of the population instincts of conservation and well-being.[26] With a more equal distribution of wealth, with a better devision of general well-being, due to our civil laws and to the emancipation of industry, the spirit of order and conservation tends to propagate itself. In place of depending upon the château and the monastery, as under other regimes in other countries, for maintenance of children by charity, the parents realize that only the product of their toil and privation will be available; hence more prudence in family

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[22] E.g., P. Leroux, who implied (*Revue sociale*, May, 1846, p. 118) that in the absence of war, misery, and inequality, France's population would have been double what it was; P. J. Proudhon predicted (*De la justice dans la révolution et dans l'église*, Paris, 1858, I, 348-49) that Malthusianism would depopulate France as it had Rome. L. Say (see note 21), a liberal, also condemned the wasteful use of resources by the idle and unproductive classes.

[23] See reference in note 16; J. Dupuit, a representative French Malthusian, and advocate of prudential limitation of population, subsequently showed (*J.d.e.*, 2d ser., XLVII, 1865, 10-36) that longevity was greatest, illegitimacy least, in low birth rate departments. See also P. A. Dufau, *Traité de statistique* (Paris, 1840), Part II, chaps. iv-v and Appendix.

[24] Births exceeded deaths by 990,000 in 1816-20; 951,000 in 1841-45; 53,000 in 1847; 506,000 in 1846-50; 362,000 in 1851-55. In 1854-55 deaths exceeded births by 105,000.

[25] *J.d.e.*, XVII, 1st ser. (1847), 174 ff.

[26] *Ibid.*, p. 176.

increase; . . . . Industrial transformation and the necessities of trade have created new conditions of internal and external competition, which exact of the population more labor than in any earlier epoch. To the difficulties of this new situation is joined the rise in the price of consumptibles, other than manufactured, a rise due to fiscal taxes in the interior, to a system of merciless customs duties, and to a stationary agriculture. In this situation the worker must have care not to prematurely increase his burdens, and we are going to find the confirmation of this supposition in relevant statistics that indicate a perceptible decrease in the number of children per marriage. We are equally convinced that if we should have, for a series of years, the average age of marriage in France, for men, a notable increase would be indicated. . . . [Man] by not increasing his family beyond measure, by marrying only when the rate of his salary, his economies, or even the advantages of the union he contracts (for the worker today seeks a dowry) permit him, must augment the sum of his material well-being; this explains in part the diminution of deaths. This diminution is besides equally due to the increase of the number of charitable establishments, to the discovery of vaccine, to the progress of medical science, and to the gradual organisation in the rural districts of a medical service.[27]

Alarm concerning France's slow demographic growth did not really develop until the middle fifties. C. M. Raudot, critic of the Revolution of 1789, charged in 1850[28] that France's relative position among the great powers was declining as a consequence of the failure of population and wealth to grow as rapidly in France as in other leading countries; that France was racially decadent, as the decline in the height of her recruits showed.[29] Critics of Raudot replied that in France all indices of progress were moving upward.[30] When deaths exceeded births, however, in 1854 and 1855, the threat of depopulation was forcibly brought to the attention of the French public in 1857 by Leonce de Lavergne, later a senator, always a defender of Malthus,[31] who had predicted a decline in the French rate of increase two years earlier.[32] Lavergne concluded, on the basis of French natural increase in 1840-56, that "population is no longer increasing in France"; that "something profoundly bad arrests France in her progress"; that the census report "indicates serious trouble in the general conditions of society." He attributed this decline in part to checks to production traceable to the revolution of 1848, to an extensive and unproductive use of resources for military purposes and public works, to unemployment caused by temporary disequilibrium between industry and agriculture; in part to an excessive observance of the Malthusian counsel of prudence, an excess traceable to extravagance.

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[27] *Ibid.*, p. 190.

[28] *Décadence de la France* (Paris, 1850). Raudot repeated his earlier opinion (see note 20, above) that France's actual population in 1789 was much above that accepted by French statisticians.

[29] As early as 1829 the French statistician, L. R. Villermé, influenced perhaps by Tenon (1785), suggested that the reduction in the average height of French conscripts was due to the effects of the Napoleonic wars which had destroyed an abnormally large proportion of those of a height conforming to conscription requirements. See *Annales d'hygiène publique*, 1st ser., I (1829), 351-99; X (1833), 27-35; also Benoiston de Chateauneuf, *ibid.*, X (1833), 239-316. This discussion of the trend in the height of French conscripts continued for many years, as we indicate in part in this chapter. Levasseur (I, 351-85), although he did not deny the deteriorating

> Extravagance has well-known effects upon the growth of population. Nothing is more easy than to confound corruption of customs with the voluntary continence of Malthus, for the consequences resemble each other, but the real difference is immense; voluntary continence is a virtue, it is the law of duty applied to the satisfaction of one of the most imperious penchants of man; the abuse of pleasures and the shameful calculations of egoism are vices.[33]

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effect of the Napoleonic wars, did conclude that the post-1850 French population was of an average height equal to that of the parental and grand parental generation. V. L. Kellogg, who reviews the relevant French materials and literature, concludes that "the average height of the men of France began notably to decrease with the coming of age, in 1813, of the young men born in . . . (1792-1802)" and, in subsequent years, of those born in 1803-15. Not until the post-war generation came of age in the late 1830's and 1840's did the average height rise. See Kellogg (in Bodart, *op. cit.*), pp. 189-91, 200. Moheau (I, 117-24) was one of the first to note the height-reducing effects of unhealthful modes of living.

[30] A. Mothéré, *Reponse à l'ouvrage de M. Raudot* (Paris, 1850); C. Coquelin, *J.d.e.*, 1st ser., XXVII (1850), 56-68.

[31] E.g., see Lavergne, *R.d.d.m.* (April 1, 1857), pp. 485, 487; *J.d.e.*, 2d ser., XXXIII (1862), 456; XXXIV (1862), 134-35.

[32] *R.d.d.m.* (July 1, 1855), pp. 210-11. Lavergne suggested as a remedy the development of means of communication to expand the market for agricultural products *(ibid.)*.

[33] *R.d.d.m.* (April 1, 1857), pp. 485-501; *J.d.e.*, 2d ser., XIII (1857), 225-28; XIV (1857), 370-81. He attributed the decline in population in

Although he observed that the nation's "vital forces" were being endangered by this excessive prudence, Lavergne did not yet express fear concerning France's military future.[34] Raudot, however, on the basis of current and past trends, predicted that the population of France, once the most populous land in Europe, would be outstripped by the populations of Germany, Russia, and England; that, as a consequence, France would lose her priority among nations.[35]

Lavergne upon a number of subsequent occasions, prior to the outbreak of the Franco-Prussian War, expressed moderate alarm at the trend in French population growth. In 1859 he regretted that in France production had not increased sufficiently to permit a more rapid population growth.[36] Commenting upon the more favorable returns of the census of 1861, he noted that the decline in the rate of growth had diminished and, since public attention was now directed to its moral and material causes, growth might become adequate. But he observed, as he did again in 1867, that France's population was being outstripped by that of several other powers, especially Germany and England.[37] When the census returns of 1866 showed further improvement, he noted that France's low natality was at least partly balanced by low mortality and stated that the threat of depopulation was exaggerated.

> Public opinion, as is often enough the case in France, has passed on this question from one extreme to the other. It long showed itself much too indifferent; today it appears disposed to exaggerate the danger. It generally employs the word *dépopulation* which is not exact, or which, at least, is [applicable] only to half the territory. The facts are grave enough without magnifying them still more.[38]

Legoyt represents the moderate point of view. Like Fayet,[39] Legoyt attributed the sharp decline in France's rate of natural

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some departments to internal migration, traceable to harvest failures, the unpleasantness of life in mountainous districts, to railroad development, and to the government's spending more money in some departments than in others. See *J.d.e.*, 2d ser., XIV (1857), 375-76.

[34] *R.d.d.m.* (April 1, 1857), p. 489.

[35] *Le correspondant* (May, 1857), pp. 56-57.

[36] *A.s.m.p.*, XLVII (1859), 302.

[37] *Ibid.*, LIX (1862), 460-62.

[38] *Ibid.*, LXXX (1867), 157, 161. His italics.

[39] See Fayet, *ibid.*, XLV (1858), 39, 66.

increase to conditions which were allegedly unusual and temporary, that is, to cholera, war, and dearth.[40] Nevertheless, he considered the failure of the absolute number of French births to increase to be "a remarkable condition which probably occurs in no other country"[41] and warned against a further decline in natality.

> It is necessary nevertheless . . . that this relenting of fecundity does not exceed a certain proportion; for the prolongation of the average length of life, having limits fixed by nature, a time would necessarily come when, as a consequence of a progressive diminution of the reproductive force of the country, one would reach first an equilibrium between births and deaths, which constitutes a stationary state; then a regular excess of deaths, that is to say, depopulation. . . . But this fear is premature. In virtue of the law that population proportions itself to subsistence, one is able to believe that, when the economic situation of our country will have been ameliorated by a diminution of dearth or by an increase in wages, one shall see marriages, whose number besides has not ceased to grow, become more fecund, or at least conserve their actual fecundity, which suffices to assure increase of our population, even though very slow.[42]

In his later discussions of French demographic trends Legoyt pointed out that natality was low in only a small number of departments[43] and that the decline in natality was not confined to France but had begun to manifest itself in other countries.[44] To English and French charges that France was decadent and threatened with depopulation and political decline[45] Legoyt replied that both the absolute number of births and the rate of increase had again risen,[46] that mortality rates (crude and specific) had declined since 1806-09 and were below those of many countries; that the number of conscripts rejected because of lack of height or constitutional defects had declined somewhat; and that the average height of those in certain branches of the army had risen.[47] Essentially a Malthusian, Legoyt be-

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[40] Legoyt estimated the annual rate of natural increase at 1/213 in 1817-53, 1/180 in prosperous 1841-45, 1/350 in less prosperous 1846-50. After 1845 natural increase was checked by dearth (1846-47), revolution (1848), cholera (1849, 1854), failure of the silk harvest (1853-54), famine (1854-55), war (1854-56). Deaths exceeded births by 69,000 in 1854, the first year of natural decrease since 1772; by 36,000 in 1855. Cholera, famine, and war increased deaths to 225,000 above normal in 1854; in 1855 war and famine killed 115,000. Births were 90,000 below normal in 1854-55. See Legoyt, *J.d.e.*, 2d ser., XIII (1857), 327-30; XIV (1857), 356 ff.; XVIII (1858), 360-80; also Fayet, *J.d.e.*, 1st ser., XII (1845), 234.

[41] *J.d.e.*, 2d ser., XIII (1857), 202.

[42] *J.d.e.*, 2d ser., XIII (1857), 331. Lavergne, who at times said that France's slow growth was no passing phenomenon, criticized Legoyt for stressing the decline in mortality when natality was also falling in the same degree. See Lavergne, *J.d.e.*, 2d ser., XL (1863), 491 ff.; also the summary of his opinions up to 1865 in his *L'agriculture et la population* (Paris, 1865), pp. 305-43, 418-19, 443-68.

[43] "The diminution of population by enfeeblement of fecundity would be a just subject of regret and even of inquietude, if this sad phenomenon were not confined to a small number of departments among which at least it does

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not appear to have been going on long" (*J.d.e.*, 2d ser., XXXIII, 1862, 272). He attributed the depopulation of Normandy to birth restriction, that of the mountainous departments to net emigration.

[44] "The same observation applies to a not less characteristic phenomenon which has manifested itself for about a quarter of a century in all the states of Europe, that is, the gradual diminution of births. This diminution is one of the most remarkable facts of social physiology in our time, in the sense that it coincides with an increasing number of marriages, with the greatest development and the most equal distribution of public wealth history could mention, with a considerable increase in the duration of human life, and that it is able, consequently, to be considered as the effect of a prolonged and increasing attainment of well-being by the masses." See *J.d.e.*, 2d ser., XXXVIII (1863), 7; *A.s.m.p.*, XCII (1870), 232.

[45] See C. W. Willich and E. T. Seargill, *J.R.S.S.*, XXI (1858), 297 ff.; also F. Marshall (*Population and Trade in France, 1861-62*, London, 1862, pp. 17-18, 34-35, 56-57), who comments upon the unwillingness of the French to have children and predicts eventual depopulation: "There is no immediate sign that the population of France has yet reached its maximum of development; there is room enough to fill, and the quantity and value of agricultural and industrial production are rising so fast, that the means of existence for a larger population cannot be put in doubt; but if the people refuse to have children, and the births continue to fall at the average rate of the last seventy years, it cannot be expected that the progress of number will last beyond the end of the present century, and it is to be feared that the next generation may see the population of their country going backwards."

Curiously enough, about this same time a British writer, having concluded that emigration would keep the British population nearly stationary, characterized this situation "as one of no sinister augury" (see *North British Review*, XIII, 1853, 152). Another added that France's lack of colonies and lack of progress in manufacturing made it impossible for her to absorb as large an annual increment of population as Great Britain (see *ibid.*, p. 173).

[46] The absolute number of births reached a maximum of 1,018,000 in 1859, declining intermittently thereafter. The secular downward trend in the rate of natural increase continued.

[47] *J.d.e.*, 2d ser., XL (1863), 200-24; 3d ser., XIX (1870), 40; also 2d ser., XIV (1857), 351. Fayet stated, however, that in at least one department (Pas-de-Calais) the height of conscripts had fallen since 1850 and mortality had improved only slightly if at all. See Fayet, *J.d.e.*, 1st ser., XXXIII (1852), 276-84; *A.s.m.p.*, XXIII (1853), 437.

lieved that although France's population would never grow rapidly, it would not decrease, inasmuch as there would always be a natality-sustaining demand for labor.[48] As means to sustain population growth, he advocated measures to reduce mortality and the removal of both barriers to immigration and legal obstacles to marriage.[49]

Members of the Société d'économique politique and the Académie des sciences morales et politiques in part supported, in part rejected, Lavergne's pessimism. Some suggested that the causes of the decline in natural increase were temporary; others that the decline in natality had been accompanied by an improvement in the lot of the masses and by an extension of longevity. Some, following Malthus, said that it was dangerous to emphasize the importance of population growth, that population would grow if conditions warranted. M. Block, who later predicted that population pressure would create a crisis in world affairs, denied that the French were decadent and stated that their number would continue to grow.[50] Some considered the decline in natality and in the rate of natural increase to be a "natural" phenomenon. Some drew attention to the causes of the decline in natality: celibacy and deferment of marriage (a deferment caused by extravagance, increased doweries, and the rising cost of educating children), the growing desire of men to improve their lots, the lack of access to colonies, the decline in religious faith. Internal migration, which had caused the depopulation of some departments[51] and which (according to Lavergne) checked natality by disturbing the sex ratio, was attributed to the development of railroads, to the higher salary levels in some departments, and to other sources of attraction in departments to which migrants moved. Several writers stated that France's political and militaristic power would be threatened if her population lagged behind that of other lands. On the whole, not many were alarmed prior to the late 1860's.[52]

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[48] France is "a grown-up country, a country arrived at maturity where all the ways of proceeding are regular, where the influences, good or bad, which determine the conditions of its progress in the order of moral or material facts, are in some manner the resultant of an organism arrived at the plenitude of its development." See *J.d.e.*, 3d ser., VI (1867), 372; also VII (1867), 212.

[49] *J.d.e.*, 3d ser., VII (1867), 221-28. He attributed the decline in natality to the decline in the fertility of the married, a decline he believed to have been continuous since 1775. His method of comparing births with marriages, however, is untrustworthy. Among the causes of the lowness of the birth rate he enumerated the growth of foresight and ambition which had accompanied the increase in wealth and comfort; uncertainty caused by the persistent spirit of revolution; the complete lack of poor relief which made foresight necessary; the increase in religious celibacy; the enfeeblement of religious sentiments; the growth of prostitution; the rising cost of living; the gradual rise in the average age at which marriage was contracted; the marriage-retarding effect of conscription; the unwillingness of rural women, who nursed urban children, to become pregnant often; the increase in abortion and infanticide. He rejected Doubleday's theory, Le Play's theory, and the theory that fecundity varied with race (*ibid.*, pp. 209-21).

[50] "It may be true," said Block, "that the Gallic race is less fertile than other races, but the conscription, the late age at which Frenchmen generally marry, the limit which they put to the number of children they desire to have, are causes which have much influence in retarding the population of France" (reprinted from *Le Temps*, Jan. 14, 21, 1862, in *J.R.S.S.*, XXV, 1862, 72-74).

The French Academy of Medicine, which was to devote three more series of sessions (1885, 1890, 1917) to the problem of depopulation, first considered the problem in 1866. M. Broca, author of the chief papers and in part a Malthusian, said that the French population was not physically decadent; that the decline in natality was the result of voluntary limitation of family size and not of natural infecundity; that both the height of recruits and the relative number of conscripts eligible for service were increasing; that the age composition of the French population was more favorable to economic production than was that of other countries; that mercenary wet nursing had not produced a decadent condition in the French population;[53] that the total number of births, "a false criterion of the prosperity of a population," would continue to grow; that France is in excellent condition and "not in danger."[54] M. Bergeron and M. Larrey accepted Broca's conclusions but charged him with being too optimistic.[55] Both Boudet and Guerin insisted that France's international position was in danger, inasmuch as her rate of population growth had fallen and was falling and was exceeded by that of other great powers.[56]

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[51] On rural depopulation see Chapter II.

[52] See *J.d.e.*, 2d ser., XIII (1857), 229-33; XIV (1857), 137-40; XXXIII (1862), 454-57; 3d ser., V (1867), 307-25; *A.s.m.p.*, XXIII (1853), 440; XXIV (1853), 447-57; XXXIX (1857), 213-26; XL (1857), 183-201; XLI (1857), 285-93; XLVII (1859), 308. While Michelet (*La femme*, 1860, cited by A. Tournaire, *La plaie française*, Paris, 1922, p. 251) said that the quality of the French population was declining, those writers who at this time supposed that natural fecundity could decline attributed only the low natality of the upper classes to this cause. See *A.s.m.p.*, XLIII (1858), 93-98; XC (1869), 153-64; also De Chateauneuf, *ibid.*, VII (1845), 210-38.

[53] Both J. Guerin and M. Boudet had described mercenary wet nursing and artificial feeding as the main causes of infant mortality in France. See *Bulletin*, XXXII (1866-67), 378-400.

The defeat of Austria by Prussia in 1866, a defeat that presaged Prussian dominance among the German states, served, as Legoyt states, to call "particular attention" to the "very feeble increase" of France's population.[57] The emperor, in opening the legislative assembly, February 14, 1867, commented on the unification and growing power of France's neighbors and urged a new method of conscription, saying that "the influence of a nation depends upon the number of men that it is able to place under arms."[58] It was several times stated in the influential *Revue des deux mondes* that France's slow demographic growth relative to that of Germany and Great Britain threatened her ascendancy in Europe.[59] In 1868 L. A. Prevost-Paradol, in his *La nouvelle France*, a work that aroused widespread comment,[60] made growth of population the basis of the cultural future of

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[54] *Ibid.*, pp. 549-71, 596-601, 839-62, 889; XXXIII (1868), 458-62.

[55] *Ibid.*, XXXII, 617-31, 656-80.

[56] *Ibid.*, pp. 741-48, 788-99, 810-24, 882-90.

[57] Legoyt, *J.d.e.*, 3d ser., VI (1867), 356.

[58] *Annales du sénat*, I (1867), 5. A year earlier Senator A. Thierry drew attention to the fact that while France's population "remains stationary," the number of illegitimate births was increasing. He opposed a proposal to compel all men aged 25 or more to marry and to tax all unmarried persons of marriageable age, advocating instead the promotion of religion and morality and the suppression of the clandestine sale of immoral books. Thierry desired both more population growth and the improvement of public morals, whereas the above proposal was designed merely to improve public morals. See *ibid.*, III (March 13, 1866), pp. 3-4. In earlier discussions of the advisability of re-establishing "tours" at hospices it was said that their re-establishment would reduce infanticide and child exposure; and that the state was obligated to preserve the lives of those born out of wedlock and to enable those thus born to become useful citizens. But reference was not made in this connection to the slow growth of population. See *ibid.*, IV (June 13, 1862), 61-67; III (April 21, 1865), 273.

[59] L. Le Fort, *R.d.d.m.* (May 15, 1867), pp. 462-65; L. Reybaud, *ibid.* (April 15, 1868), pp. 986-87.

[60] E. Ollivier (*L'empire liberal*, Paris, 1907, XI, 13 ff.) describes the impression made by this work.

France, of her future colonial policy, her future world policy, and her future policy relative to Prussia and (after the Franco-Prussian War) Germany. In 1868, relative in part to the problem of dealing with Prussia, he said:

> If our population, obstinately attached to the native soil, continues to increase with such extreme slowness, as during the past ten years to have remained almost stationary or decreasing, we shall be considered, in all proportions, in the Anglo-Saxon world, much as Athens was considered formerly in the Roman world.[61]

> It is necessary then to consider as *absolutely chimerical* every project and every hope to conserve for France her relative rank in the world, if these hopes, these projects, do not take for their point of departure this maxim: *the number of French must augment rapidly enough to maintain a certain equilibrium between our power and that of the other great nations of the earth.*[62]

The slow growth of France's population was several times discussed in the French legislature just prior to the Franco-Prussian War. In 1869 M. de Dalmos said that France's population was growing much less rapidly than that of England, Russia, Spain, etc.; that the slow growth was due to high infant mortality and to a decline in the number of births per marriage from 4 to 3; that the decline in natality was due to a decrease in the relative number of proletarians who, lacking foresight, were fertile; that infant mortality should be reduced.

> I do not believe that there is a question more grave and more worthy of the attention of the Chamber, for the actual situation is really alarming, and it could certainly bring about, in a relatively short time, the depopulation of our country and the degeneration of our race, if it perpetuates itself.[63]

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[61] *La nouvelle France* (Paris, 1868, 1876), p. 409. A liberal optimist, Prevost-Paradol prophesied a North African empire in face of the prevailing dissatisfaction with the ill-fated Mexican adventure (*ibid.*, pp. 416-18).

[62] *Ibid.*, p. 413; his italics. See also *ibid.*, pp. 390-91, 410, 414-19.

[63] Séance of April 12, 1869, of corps législatif, *Annales du sénat*, II (1869), 362-65. This séance was really devoted to consideration of state provision of clothing for children assisted by the state. In several earlier discussions of measures to regulate child labor, to prohibit bad treatment of children, and to promote the breast-nursing of children by their mothers, there is no reference to depopulation; only the importance of the health of children is stressed, for military, economic, and humanitarian reasons. See *Annales du sénat*, X (1866), 227-28; VI (1867), 171-74; VI (1868), 17-31.

A year later pro-natality measures were proposed in the Senate: "to accord indemnities and pecuniary and honorific recompense, and other advantages, to members of families including a large number of children." The proponent of this set of measures attributed France's slow growth to celibacy and "voluntary infecundity." The two chief discussants of these measures, Chevalier and Dupin, considered them unsuited to achieve the end sought. Baron Dupin declared that taxation of celibates, aids to the married and fertile, etc., would not augment population; that only the reduction of infant mortality and the prolongation of life would increase numbers. Chevalier, expressing the opinion of a committee which had considered the proposals, declared that population growth was not always an index of prosperity and therefore in need of promotion; that population growth was desirable only if the capital necessary to make this new growth productive was available and the newcomers were of good stock, competent, and industrious. The state needed only to guarantee security by increasing public order, preserving economic liberty, and assuring the worker freedom to work. Such action by the government not only would assure the necessary growth but constituted the only type of action the government should take.[64]

Reduction of the naturalization requirements was advocated at this time for military rather than demographic reasons. In general, it was contended that the reduction of the naturalization requirements would make Frenchmen of foreigners resident in France and of their children and thus increase the number of persons liable to conscription and military service. It was also proposed that persons born in France of foreign parents be made liable to conscription even though unnaturalized. Although these measures were not discussed in terms of France's slow population growth, they may have been motivated somewhat by the slow growth of France's population of military age relative to that of Germany.[65]

[64] *Annales du sénat*, I (Jan. 11, 1870), 159-62. Two months later (*ibid.*, II, March 4, 1870, 192-93) attention was given to proposals to curtail infant mortality but "depopulation" as such was not discussed.

[65] See, for example, *Annales du sénat*, V (May 23, 1867), 199-225; II (March 20, 1869), 2-31; V (July 2, 1870), 352.

CHAPTER VI

DEPOPULATIONIST FEARS: REPOPULATIONISM (1870-1937)

The defeat of France by Prussia in 1870-71 greatly intensified the alarm of French social scientists and publicists at the low level of natality and population growth in France, in contrast to the levels prevailing in other large European countries. For this defeat not only dimmed the military prestige of France and cost the country several millions of population;[1] it altered significantly the distribution of demographic forces on the Continent;[2] it led foreign observers to conclude that the French race was decadent[3] and that France had lost permanently her former position as the dominant continental power.[4] In France

[1] In 1872 France numbered 1,956,000 less than in 1866, chiefly because of territorial losses. In 1870-71 deaths exceeded births by 558,000. Bodart (pp. 151-53) estimates at 14 billion francs the direct money loss suffered by France as the result of the war, the military losses from war and disease at about 500,000, the loss from the Communard Insurrection at about 50,000, and the excess deaths among the civilian population in 1870-71 at about 600,000. For other estimates of the mortality attributable to the war and its subsequent effect upon natality see J. W. Nixon, *J.R.S.S.*, LXXIX (1916), 418-44; V. Turquan, *ibid.*, LIV (1891), 692-96; Levasseur, II, 148.

[2] Levasseur (III, 213, note) pointed this out already in paper read in 1872.

[3] E.g., in 1875, a German, A. Freiherr von Fircks (*Die Volkswirtschaft Deutschlands und Frankreichs*, Berlin, 1875) stated that the population of France and Prussia would be identical in 1892; that the average age of the French population was 31¼ compared with 29 for the German; that the French people were becoming old and decrepit; that her conscripts were of inferior quality, and that the French nation was becoming the docile tool of the Catholic Church.

[4] Thus in 1882 a comparative statistical analysis led W. A. Guy to conclude that military preponderance on the continent had passed from France to Germany, with Russia crowding into prominence. See *J.R.S.S.*, XLV (1882), 526-27. "France may still continue to be hailed as the *magna parens frugum*, but the grander words *magna virum* will be no longer applicable," the London *Times* remarked on January 16, 1883. It prophesied France's decline, saying that by 1932 France, which "a century ago was really La Grande Nation, having still the largest population in Europe, will be but sixth in rank in point of numbers. . . . There are not wanting now Frenchmen who look on this decreasing population as but one among many signs of degeneracy, and are ready to exclaim hopelessly, 'Finis Galliae.' " See *J.R.S.S.*, XLVI (1883), 119-28.

alarmist prophecy and warning became the order of the day, and French writers predicted almost with one voice that France's slow demographic growth relative to that of Germany, Russia, and England would give these countries a cumulative military and political preponderance over France.

During the closing quarter of the nineteenth and the early years of the twentieth century, a large and at times increasing volume of articles, pamphlets, and books dealt with "depopulation," its causes, consequences, and cure.[5] Members of the French scientific societies, such as the Société d'économie politique,[6] the Académie de médecin,[7] and the Académie des sciences morales et politiques,[8] frequently discussed the problem. In general, major emphasis was placed upon the military and political implications of the comparatively slow growth of France's population.[9] Other alleged consequences were not wholly neglected, however, and an integrated pro-populationist philosophy was developed, the major tenets of which we give below. The state was urged to intervene and encourage population growth, and legal measures designed to promote population growth began to be introduced in the French Chamber and Senate.

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[5] Turquan (*op. cit.*) in 1902 listed 216 works on population, the majority of which dealt with depopulation. In the catalogue of La Librairie Française the works listed under the head, "Population," include four depopulationist works published during the period 1850-70; 7 in 1873-79; 4 in 1880-89; 14 in 1890-99; 37 in 1901-09; 31 in 1910-14; 12 in 1915-18; 3 in 1920-21. This list is incomplete, for many works concerned with depopulation are either omitted or included under other headings. The many works cited in the present study give an impression of the attention the question has commanded.

[6] E.g., see *Annales*, X (1873-74), 34-56; XV (1885-87), 154-69; *J.d.e.*, 4th ser., XLVII (1889), 418; 5th ser., XXIX (1897), 115-32. For a recent discussion see *ibid.*, 6th ser. (1931), 221-53.

[7] See *Bulletin*, 2d ser., XIV (1885), 62-82, 114-26, 146-51, 181-86, 284-99, 314-15, 349-63; XXIII (1890), 674; XXIV (1890), 62-76, 93-135, 332-66, 488-92; LXXVIII (1917), 3-5, 123, 134-45, 165-92, 195-206, 213-18, 303-22, 367-88, 396-418, 441-56; also LXXVII (1917), 604-34; I (1872), 1044-45; II (1873), 1024-28; LXXV (1916), 351. These papers are concerned predominantly with causes and remedies. The papers are the outgrowth of commissions appointed in 1885, 1890, and in 1916 to study the problem and make a report. The 1917 findings against birth control and abortion and in favor of taxing the childless and small families for the benefit of large families were also published in *R.p. et p.* (XCIV, 1918, 17-26), which also carried an article by the economist, A. Landry, who described the population problem as France's "fundamental problem" (*ibid.*, pp. 5-16).

[8] Between 1857 and about 1920 many papers concerned with the French population problem appeared in the proceedings of the society.

[9] In 1876, in a much discussed letter (see *J.d.e.*, 3d ser., XLIII, 1876, 293-97), Lavergne pointed out that England and Germany were each increasing by more than 400,000 a year, whereas France was remaining stationary. In 1881 Leroy-Beaulieu said that Germany's increasing demographic ascendancy would prevent France from recovering Alsace-Lorraine (*L'éco-*

Several factors served to counterbalance in part the growing fear of depopulation and the pro-populationist propaganda. Some attention was diverted from the population problem by the rapidity with which France paid the German indemnity and restored French credit, by the splendor of her international expositions (1878, 1889), by her success in developing a colonial empire after 1880, and by the political struggles between right and left and between the clericals and the anticlericals.[10] Second, as Legoyt and later Levasseur and Leroy-Beaulieu predicted, natality began to decline more rapidly in foreign countries than in France and therefore to approach the French level.[11] Third, in accordance with the liberalistic laissez faire philosophy which remained dominant in France, it was asserted by some writers that state intervention for the purpose of augmenting

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nomiste français, May 7, 1881). R. Frery warned: "We shall lose in the long run the battle of life if we do not succeed in uprooting the evil which consumes us. The population of Germany doubles regularly in fifty years; within less than fifty years the Teutons will try a desperate effort to burst their too narrow frontiers; unhappy we if we are not able to check this mass by an equally compact mass." See *Le péril national* (Paris, 1881), pp. 339 ff., cited by Auburtin, *La natalité*, p. 22. Sixteen years later J. Bertillon warned: "In fourteen years Germany will have twice as many conscripts as France; then that people which detests us will devour us; the Germans say it, instill it, and will do it." See *R.p.e.p.* (June, 1897), pp. 538-39. In 1909 each of the 22 works submitted in a prize contest on the causes and consequences of low natality stressed the loss of military power. See summary report of H. Joly, *A.s.m.p.*, CLXXII (1909), 106-30.

Similar statements appeared in nearly all discussions of the "depopulation" problem. E.g., see Lefèvre Saint-Organ, *La question sociale et la crise* (Paris, 1886), p. 13; M. Tounnisseaux, *Annales*, X (1873-74), 39; Charles Richet, *R.d.d.m.* (April 15, 1882), pp. 900-32; the Marquis de Nadaillac, *Affaiblissement de la natalité en France* (Paris, 1886), *Le péril national* (Paris, 1890).

[10] Auburtin, p. 22; Levasseur, III, 271.

[11] See E. Masquart, *Mortalité, natalité, et dépopulation*, a report made in 1902 to the Paris Society of Anthropology. It is interesting to note that in 1933 J. Segry suggested that Germany's falling natality would cause her to lose her ascendancy in European affairs. See *R.d.d.m.* (Jan. 1, 1933), pp. 193-98.

natality was essentially socialistic.[12] Finally, it was said that France's real problem was the prevention of socialism and the abolition of barriers to competition (e.g., tariffs, monopolies, certain taxes); that these barriers checked production and population; that population growth is desirable only if preceded and accompanied by an augmentation of production and therefore by an improvement in individual well-being; that for economic and noneconomic reasons a smaller, healthy and well-to-do population was preferable to a larger and poverty-stricken population; that number was a secondary factor in science, art, industry, commerce, politics, war, and conquest, wealth providing the real sinews of war; that efforts to increase population would fail, inasmuch as France had as large a population as she needed, and could and would experience greater population growth only if laissez faire were restored and the use of national resources in wasteful governmental projects were discontinued.[13]

Despite these counterbalancing factors and arguments, alarm at the threat of depopulation did not diminish. For the absolute number of births continued to decline, falling below the annual number of deaths five times in 1890-1900. The problem of preventing an eventual decline in numbers, therefore, was constantly referred to in newspapers, periodicals, textbooks, and literary works in general. In 1896 the proponents of pro-populationist measures established L'alliance nationale pour l'accroissement de la population française, an organization which has apparently been very effective, directly and indirectly, in focusing public attention upon population trends and their implications and in promoting pro-natality legislation.

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[12] Lavergne implicitly recognized this when (see *A.s.m.p.*, CVII, 1877, 134) he admitted the validity of certain Malthusian arguments and advocated as means to augment the rate of population growth: (1) a peaceful foreign policy; (2) such reduction in military service as was compatible with national defense; (3) curbs on taxation and economically unproductive expenditures; (4) policies favorable to agriculture; (5) measures to reduce mortality. Levasseur denied that it was the function of the state to penalize the childless and to reward the parents of families of three or more, saying that the principal task of the state was "to assure the exercise of individual liberty and the right of property," the fundamental bases of individual and national well-being. See *R.p.e.p.* (Oct., 1897), p. 29; also Levasseur, III, 216-26, and *A.s.m.p.*, CLX (1903), 230-31; also G. Lagneau, *ibid.*, CXX (1883), 194.

[13] E.g., see Levasseur, III, 213-26, 483-86, 494-96; G. de Molinari, *J.R.S.S.*, L (1887), 183-96, and *Ultima verba* (Paris, 1911), pp. 151-56; comments of various French economists in *Annales*, X (1873-74), 52-55; *J.d.e.*, 3d ser., XLIII (1876), 297-300; XLIV (1876), 102-05; XLV (1877), 125-30; 4th ser., III (1878), 332-52; 6th ser., XXXIV (1912), 525-26; C. de Varigny, *R.d.d.m.* (Dec. 1, 1890), pp. 597-616; G. le Bon, *Revue bleue* (May 1, 1926), pp. 261-64; also the writer's article in *J.P.E.*, XLIV (1936), 597-611.

By the close of the century the Senate and Chamber were discussing many social questions in terms of their relation to population growth and problems associated therewith. Measures to stimulate population growth were introduced after 1880 but not adopted. Discussions of measures pertaining to marriage almost invariably became discussions of depopulation. Thus in 1890 with respect to a proposed law concerning the marriage of indigents, it was asserted "that it is the duty of the legislator to encourage marriage" inasmuch as France's population grows so slowly.[14] In 1896 proposals to render the legal and formal requirements of marriage less complex and costly were defended on the grounds that such action would augment the number of marriages and births and reduce the number of illegitimate unions.[15] Again in 1907 the proposal to reduce the age at which males and females could marry without parental consent was supported by the argument that such a reduction would increase the number and quality of French births. It was said that France, formerly the most populous nation in Europe, had descended in rank, would soon be passed by Italy, and was steadily being outstripped by Germany.[16] In 1911 a proposed law to facilitate the marriage of minors, aged 21, was defended on the ground that it would help somewhat to arrest "depopulation."[17] In 1908 both the legitimization of adulterine children and the divorce problem were analyzed in terms of their effects upon natality.[18]

Proposals to provide state aid to needy children were defended on the ground that they would check France's progressive and ever more alarming demographic decline and provide for national defense a virile military reserve.[19] There was some criticism on demographic grounds of the naturalization law of 1889, particularly as applied in Algeria, where it allegedly was transferring political mastery to naturalized but not really assimilated Spaniards and Italians; for through immigration and natural increase these two peoples were growing more rapidly than the French in Algeria.[20] Heavy public expenditures for colonial and other purposes were condemned on the ground that they depressed natality.[21] Reduction of the period of military service was described as inadvisable in view of France's low natality.[22]

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[14] *Annales de la chambre des deputés*, II (June 19, 1890), 506.

[15] *Ibid.*, II (June 11, 1896), 228-29; *Annales du sénat*, I (March 24, 1896), 377-81.

[16] *Annales du sénat*, I (Jan. 30, 1907), 466-71; I (May 7, 1907), 723-34, especially 727.

[17] *Ibid.*, III (Dec. 5, 1911), 200.

[18] *Annales de la chambre*, II (June 5, 1908), 179-80.

In 1902 Waldeck-Rousseau established an extra-parliamentary commission on depopulation when action was requested by 133 senators acting under the auspices of L'alliance nationale. In the statement of objectives it was asserted that France would soon rank sixth among world powers and have a population but half that of Germany.[23] While a number of scholars were assigned to study and report on various aspects of the depopulation problem, lack of funds and lack of interest soon led to a termination of the commission's meetings, and only a few reports were published.[24] Under M. Combes a new commission continued the work of that established in 1902, received reports in

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[19] *Annales du sénat*, III (Dec. 1, 1903), 225; I (Feb. 26, 1904), 272-83, 286-93, especially 289; *Annales de la chambre*, III (June 14, 1904), 432; III (June 16), 467; I (Jan. 19, 1911), 189; (March 11, 1912), 849.

[20] *Annales de la chambre*, V (Dec. 21, 1903), 1236; *Annales du sénat*, I (March 10, 16, 1893), 320-21, 383-84; II (July 10, 1893), 660-61.

[21] *Annales de la chambre*, IV (Dec. 23, 27, 1909), 1811-12, 1877.

[22] *Ibid.*, II (March 16, 1905), 1163.

[23] See Auburtin, chap. ii; O. C. Beale, *Racial Decay* (London, 1911), pp. 171-200; series of articles on "Le dépeuplement de la France," in *La revue hebdomadaire*, beginning May 1, 1909; description of proposed policies in *La dépopulation* (Paris, 1902) by Senator E. Piot, a leader in the pro-natality movement.

[24] These reports dealt with the moral causes of the decline in natality; with morality, mortality, social capillarity, militarism; with economic and fiscal obstacles to natality; with means of encouraging natality, etc. In 1906, in the quinquennial census, as a result of interest in depopulation, data on the productivity of marriages were secured (see *Statistiques des familles en 1906*, p. 1).

1905, and met in 1908 after deaths had exceeded births in 1907. In 1912 a new commission consisting of 300 members was set up by M. Klotz, Minister of Finance. Four undercommissions to study financial, administrative and juridical, military, and social aspects of depopulation were formed.[25] M. Klotz recommended to the French president that plans to check depopulation be co-ordinated with the general plan of national defense. This commission, whose life was limited to nine months, accomplished little.[26] The extended discussions of depopulation in the Senate in 1913-14 and, following the termination of the war, in 1918-19, evidenced little comprehension of natality-determining factors, emphasis being placed upon the need for a law to suppress contraception and abortion.[27] Laws to suppress contraception and abortion went into effect in 1920 and 1923. Since 1920 a number of pro-natality measures, some of which are modifications of earlier measures, have been enacted, the earlier lack of intense interest in depopulation having been somewhat dissipated after the World War.[28]

During the war interest in the problem of depopulation was kept alive both by organized propaganda and by individual books and articles, many of which were inspired by France's then felt military needs. Parliamentary pro-large family groups were organized in the Chamber in 1914, in the Senate in 1917. In 1919 the Conseil superieur de la natalité was established, becoming in 1920, under President Poincaré, the Conseil superieur de la natalité et de la protection de l'enfance, a branch of the Ministry of Health, with departmental subcommittees, and with the duty of examining and recommending measures to elevate natality, check mortality, develop puericulture, and protect large families. The departmental governments were likewise to concern themselves with aspects of population problems. Since the World War a corresponding increase in organization has been effected among those interested in promoting population growth. Out of the pro-natality deliberations of the Chambers of Commerce of Nancy and Paris (1915, 1916) have developed the annual natality congresses (the first of which was held at Nancy in 1919) at which populationist measures are appraised and propagandized. By 1922 the organized pro-populationist movement, which began in 1896 with the establishment of L'alliance nationale pour l'accroissement de la population française, included eight national associations (six of which published bulletins), 62 regional associations (56 in France and 6 in the colonies), 11 federations of large families, and one national federation of single groups of large families.[29] Most of these associations confine membership to persons with three or more children. The most powerful one, L'alliance nationale pour l'accroissement de la population française, whose membership is not confined to persons with a given number of children, supports a rounded set of pro-natality measures and seeks their enactment. These organizations also acquaint the population with the fiscal and other rights which have been secured for members of large families.

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[25] *R.p. et p.*, LXXIV (1912), 623 ff.

[26] See M. Cousin, *R.p. et p.*, LXXVII (1913), 80.

[27] *Annales du sénat*, I (Jan. 30, Feb. 7, 1913), 28-30, 60-71; I (March 5, 1914), 351-62; IV (Nov. 21, 1918), 851-60; XC (1919), 25 ff., 40 ff.

[28] Various factors contributed to the pre-war lack of intense interest. The sponsors of the pro-populationist campaign set no example, for, as a Paris newspaper observed in 1908, only 74 of the 445 married sponsors of the campaign had more than two children (Bertillon, *Dépopulation*, pp. 138-40). Auburtin states that one commission was originally appointed to prevent the formation of separate and effective commissions by the Senate and the Chamber; that, according to J. L. Breton, member of the Chamber, lack of parliamentary interest in depopulation was attributable to the fact that large families had no electoral power. See Auburtin, p. 34. The French Radical Block considered the population problem to be a moral problem and suspected the apostles of repopulation of reactionary and anti-parliamentary motives. See W. H. Scheifley, *North American Review*, CCX (1919), 760.

Although it was sometimes claimed in the 1920's[30] that French interest in depopulation was flagging, this claim is invalid. The pro-populationist utterances of French politicians,[31] constant reference to the problem in French newspapers, periodicals, and textbooks, the writings of pro-populationist publicists[32] and the activity of the pro-populationist organizations have kept the problem to the fore. Moreover, the realization of the long anticipated[33] penury of young adults and conscripts (a penury traceable to the low birth rate during the war years), the rise of Hitlerism, the remilitarization of Germany, and the increasing uncertainty of France's international position, revived interest in the military importance of population growth and produced (in 1935) a temporary extension of the period of military service.[34]

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[29] G. Dequidt, *Le statut des familles nombreuses;* Auburtin, chap. ii.

[30] See files of *R.S.* (1925-30).

[31] E.g., see Auburtin, pp. 37-39, *R.S.* (Dec., 1925), p. 679, index of London *Times* or *New York Times.*

[32] French newspapers comment frequently upon the demographic situation when the annual natality returns are published and after census returns are made known. France was described as underpeopled in the *Journal des Débats* (Nov. 13, 1925, p. 807), the lowness of her natality as "one of the

Certain of the dangers to France allegedly implicit in her slow population growth have already been noted. In general, the allegedly untoward consequences of "inadequate" or negative population growth may be classed under ten heads. Some writers have subscribed to nearly all (e.g., F. Boverat and J. Bertillon); others to a few. Most important, in the opinion of virtually every French writer, is the threat of loss of military

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great menaces to the future" (*ibid.*, Feb. 25, 1927, p. 319). In 1924 J. Bourdon described France's demographic prospects as bad and predicted that soon the population of Italy would exceed hers, already exceeded by that of all other leading powers (see *Mercure de France*, CLXIX, 1924, pp. 112-13). The census returns of 1926 led the editor of *Le Figaro* (Paris, Dec. 28, 1926) to express concern over France's "penury of men" and to advocate both the familial vote and greater bounties for large families. See also *L'économiste français* (Jan. 1, 1928), pp. 1-3; *R.S.*, LXXXVIII (1928), 146-47; *Le Figaro* (Sept. 27, 1928); *Le Temps* (Oct. 1, 1928); V. Perlman in *Nouvelle revue* (Jan., 1930), pp. 65-70; L. Naudeau, series of articles on French depopulation, beginning in *L'illustration* (Jan. 26, 1929).

[33] E.g., Poincaré in 1924 expressed himself in favor of large families, immigration, naturalization of aliens, reduction of mortality, etc., and suggested that by 1935-40 the smallness of the relative number of those born during the war years would precipitate serious agricultural, industrial, and military problems. See London *Times*, April 25, 1924, also March 7, 1924.

[34] Hitlerism, with its emphasis upon population growth, militarism, and territorial expansion, has redirected French attention to comparisons of German and French natality. M. de Guichen recently expressed alarm at Germany's rising natality (*J.d.e.*, April, 1935, p. 233). General Clement-Grandcourt stated that since land reclamation projects in Germany would provide territory for all German population increase during the next 20 to 25 years, it was evident that Germany was preparing for conquest rather than to relieve population pressure (*Mercure de France*, CCLIII, 1934, 282, 288-90). In 1932 when German natality was below that of France and Poland was supporting France, Major Hans Rohde, a German propagandist, tried to show that France's militaristically effective and growing population was nearly double that of nongrowing Germany. Rohde added the Poles and the 58 million French colonials to the domestic French population. See Rohde, *Franco-German Factors of Power* (Berlin, 1932), pp. 35-40.

power; next in importance, the threat of loss of international political prestige. The ten classes of alleged consequences follow:

1. MILITARY. Either a decrease in population or a less rapid growth than is experienced in other lands will weaken France militaristically, reduce the number and quality of her conscripts, enable other peoples (Germans, Slavs, Anglo-Saxons) to ascend above the French,[35] compel France to renounce all plans for military conquest,[36] make France dependent for security upon alliances with other powers,[37] and encourage other powers (especially Germany) to undertake war against France.[38]

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[35] E.g., see A. Chéradame, *La crise française* (Paris, 1912, 1925), pp. 5, 383-84; G. Bourdon, *The German Enigma* (Paris, London, 1914), p. 192; H. Lichtenberger, *L'Allemagne d'aujourd'hui* (Paris, 1922), pp. 2, 6-7. Charles Briand, *Le dépeuplement de la France* (Paris, 1919), pp. 22-23; statements cited in du Moriez, *L'avortement* (Paris, 1912), pp. 1-16. Chéradame observed, as did Lichtenberger, that Germany's population would not grow forever, adding that so long as France kept her population from decreasing she could protect herself economically and militaristically. In 1922 A. Liesse, editor of *L'économiste français* (Dec. 30, 1922, pp. 833 ff.), reiterated that Germany's natality would not fall and that France could not depend upon Great Britain for assistance in time of war. See also symposium of views compiled by L. Naudeau, London *Times* (Aug. 25, 1925); F. Vieulle, *R.S.*, XC (1930), 88; W. S. Rossiter, *World's Work*, XVII (1908-09), 11, 132 ff.

[36] Levasseur observed about 1890 that France would have to pursue a policy of peace (III, 303); in 1899 the French minister of war said that France's low natality precluded any French attempts at military conquest (see Bertillon, pp. 17 ff.). Certain advocates of colonization expressed the same view when they asserted that if France wished to expand, it would have to be through colonies and not on the continent.

[37] This view was stated again recently by E. Herriot (*La France dans le monde*, Paris, 1933, pp. 9-10, 15, 243-44), who had Germany in mind as a possible enemy.

[38] E.g., see A. Landry, *Révolution*, p. 77. The World War, it has been said, was in part caused, in part prolonged by France's low natality, for the low natality of France and the resulting smallness of her population encouraged the Germans to attack her and made her less resistant in the face of attack. See M. Breton, *New York Times* (Feb. 3, 1920); Yves Guyot, *J.d.e.*, LXXVI (1923), 105; Lichtenberger, *op. cit.*, pp. 6-7; G. Lacoin, *Le musée social* (Oct. 1, 1920), p. 221. Auburtin (*op. cit.*, p. 20) cites evidence gathered by the French military attaché in Germany in 1913 to the effect that German military leaders were basing their plans in part on France's low natality. Many writers cited Von Moltke's remark that France's low birth rate cost her a battle every day. A German brochure, published in 1912 and dealing with the "next war," said that Germany needed France and could take it and people it with Germans (cited by B. Roussy, *Éducation domestique de la femme et rénovation sociale*, Paris, 1914, pp. 67, 70-71; also *Le Temps*, March 10, 1912). For German opinions, expressed during the war relative to German intentions of expanding the German population into

2. POLITICAL AND DIPLOMATIC. As France's population (and hence her potential military power) declines relative to that of other lands, French counsel and opinion will count for less in the policies of other lands (e.g., Germany, Latin America, Japan, England, etc.).[39]

3. COLONIAL, etc. Given a low natality, France cannot colonize, or send emigrants to foreign countries to spread the French language and culture and create respect, regard, markets, and support for France.

4. CULTURAL. Given the two effects just noted under (2) and (3), the international importance of French culture and nationality will decline.

5. FOREIGN PENETRATION. Given a low natality in France and a high natality in other lands, France will be overrun by foreign immigrants—immigrants she is too weak to exclude—whose coming may depress French natality and will denationalize, deculturalize, and delanguagize parts of France, and whose settling in border departments will make France more vulnerable to foreign military penetration.[40]

6. ECONOMIC DEVELOPMENT. Such development will proceed slowly, or cease if population grows slowly or not at all; for population growth fixes not only the labor supply for agriculture and industry but the rate of growth of foreign commerce, of industrial capacity, of the nation's ability to pay taxes, of the total capital-value of the population.[41]

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a nongrowing France, see A. Chevrillon, *R.d.d.m.* (May, June, 1934), pp. 327-31, 661-63. H. von Treitschke referred contemptuously to France's low birth rate (*Politics*, I, 230). In January, 1925, *Germania*, organ of the German Centre Party, declared that, as a result of low natality, foreign immigration, and the fact that France's population was less than Germany's, "unconsciously . . . the Frenchman has a feeling of 'animal inferiority' when he regards his prolific Eastern neighbor." See London *Times*, Jan. 26, 1925. See also E. M. Carroll, *Germany and the Great Powers, 1866-1914* (New York, 1938).

[39] Leroy-Beaulieu, *J.R.R.S.*, LIV, 372 ff.; citations in Bertillon, pp. 13-14, and O. Effertz, *R.d.e.p.*, XXVIII (1914), 130; G. Rossignol, chap. x; M. de Guichen, *J.d.e.*, LXXVI (1923), 105; R. Gonnard, *Dépopulation*, p. 102; L. Devraigne, *Je sais tout* (March, 1935), pp. 30-31.

[40] See discussion of immigration below; also M. Cousin, *R.p. et p.*, LXXII (1913), 61-62; *Living Age*, CCCXVI (1923), 741; Nadaillac, *Affaiblissement*, etc., p. 4; G. Lagneau, *A.s.m.p.*, CXXI (1884), 116, 134-35, 139.

[41] C. Richet said that since each worker produced more than he consumed, France could accumulate 2½ times as much capital as she was accumulating if her population were 2½ times as large; that France could support 100 millions with more ease than Belgium supported her then population

7. SPIRIT OF ENTERPRISE. Given a very low, a zero, or a negative rate of increase, vitality and energy, enterprise and initiative, optimism, and self-reliance will be lacking. There will be an increasing tendency to rely upon socialistic and collectivistic governmental arrangements.[42]

8. PROGRESS. Population growth constitutes the leading cause of progress. "Progress in government, belief, production, and . . . solidarity . . . proceed from an initial phenomenon, the numerical increase of a unified population."[43]

9. ECONOMIC EQUILIBRIUM AND WELL-BEING. In view of (6), (7), and (8), and of the alleged tendency toward unemployment and inter-industrial disequilibrium in an economy whose population ceases to grow or grows very slowly, low natality threatens economic well-being.[44]

(*R.d.d.m.*, July 1, 1883, pp. 221-26). E. Thierry attributed Germany's relatively great economic growth compared to that of France to the fact that German emigrants created a demand for German products (*La France économique et financière pendant le dernier quart du siècle*, Paris, 1900), whereas E. Oberée, an Alsatian, attributed France's alleged relative economic decline to slow population growth (*Wird Frankreich aus der Reihe der leitenden Völker verschwinden?*, Strassburg, 1905). C. Mourre (*D'où vient la décadence économique de la France*, Paris, 1900) mentioned among the causes of France's alleged decadence her low natality, and the preference shown by the French upper classes for governmental positions rather than for commerce, industry, and agriculture. De Brandt (*op. cit.*, p. xi) associated the decline in the relative importance of French trade and the rise of economic protectionism in France with her low natality. See also Briand, *op. cit.*, pp. 24 ff.; Landry, p. 85; E. Maurel, pp. 17 ff.; V. Turquan, *Évaluation de la fortune privée en France et à l'étranger dans ses rapports avec la fecondité des familles* (Paris, 1901); Abbé Sigurét, *J.d.e.*, 6th ser., C (1931), 244-45; A. Courtois, *Annales*, XV (1885-87), 161; A. de Foville, *R.p. et p.* (June, 1910), pp. 464-479.

[42] Leroy-Beaulieu, Bertillon, Dumont, Gide, Colson, Levasseur, Cauwès, and others have stressed these views, developed earlier by Villaumé. See *Annales*, X (1873-74), 44 ff.; Lallemand, *ibid.*, XV (1885-87), 162; Maurel, *op. cit.*, chap. ii; F. Vieulle, *R.S.*, XC (1930), 76, 87; A. de Brandt, *op. cit.*, p. xi.

[43] A. Coste, *Les principes d'une sociologie objective* (Paris, 1899), pp. 159, 237; *Le facteur population dans l'évolution sociale* (Paris, 1901). See also E. Durkheim, *The Division of Labor*, trans. G. Simpson (New York, 1933); A. Joire, *La population, richesse nationale* (Paris, 1885). E. Dupreel, the Belgian sociologist, has recently expressed a somewhat similar view (see *Deux essais sur progrès*, Brussels, 1928). G. Bouthoul, a critic of these views, says that neither history nor theoretical analysis reveals a necessary causal connection between population pressure and the spirit of invention, that the most important technical inventions have often been made in spite of and not because of population pressure (*Revue internationale de sociologie*, XLIII, 1935, 185-97).

[44] Leroy-Beaulieu argued, as do many present-day writers (see writer's

10. BIOLOGICAL AND SOCIAL. If families are small and population does not grow rapidly enough, selection within the group will become less eugenic, it will not be possible to inculcate the proper attitudes and aspirations in children,[45] and the nation itself will decline and give place to more prolific peoples.[46]

The values implicit in the works of the alarmist writers whose views and anticipations we have presented are not the personal, individualistic values of the late eighteenth- and early nineteenth-century humanitarian period, but the collective and individual-disregarding values peculiar to the Colbertian and the modern totalitarian states. These collective values, as expressed by the French repopulationists, differ from the Colbertian not in kind but in degree; for the modern writers are

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article, *Harvard Business Review*, XII, 1934, 204-21), that the slowing down of population growth threw production and consumption out of balance, and imputed the then prevailing disequilibrium in the raw material and food supply markets to the slowing down in population growth (*Traité théorique et pratique d'économie politique*, IV, 1900, 531, 614). R. Gonnard accepts the argument of L. Hersch (*I.L.R.*, XXVIII, 1933, 153-67) that a decline in natality checks the growth of the consuming population and temporarily renders the age composition of the population more favorable to production, thus creating lack of balance between consumption and production and unemployment. He denies that a slowing down of population growth can reduce unemployment, and suggests that a restoration of greater freedom of international migration and greater freedom of trade will reduce unemployment. See *Revue économique internationale* (June, 1935), pp. 501-08, 511-13, 519-21. I. Ferenczi (*ibid.*, May, 1934, pp. 369-71) attributes both unemployment and the development of autarchy in part to the decline in natality.

[45] Leroy-Beaulieu, Dumont, and others were of this opinion. Durkheim suggested (*Le suicide*, Paris, 1897, 1930, pp. 208-14), as has Halbwachs recently (*Les causes du suicide*, Paris, 1930, chap. viii), that since suicide is more frequent where families are small and "collective sentiments" are weaker, the feeling of well-being is by no means necessarily greatest where natality and population density are low.

[46] Recently Landry (*Revolution*, pp. 108-65) noted, as did J. Ferlet (*L'abaissement de la natalité à Rome*, Paris, 1902), the similarities between the Graeco-Roman and the modern French world. In 1920 M. A. Demangeon (*Le déclin de l'Europe*, Paris, 1920) expressed alarm at France's low natality and predicted that as the population of non-European areas outdistanced that of relatively slow growing Europe, Europe's power would decline. By 2000 A.D., F. Boverat recently predicted, the colored races will be overrunning demographically decadent France and Europe (*Je sais tout*, March, 1935, pp. 28-32). See also I. Ferenczi, who, noting that by 1950 the Soviet peoples alone will number 200 millions as against 200 millions or less for France, Italy, Great Britain, and Germany combined, predicted that there will be "risk of another great invasion of the West by the peoples of the East" (*Revue économique internationale*, May, 1934, pp. 367-68).

less crude in their emphasis upon man's duty to procreate for the state or collectivity. The objectives of this procreation remain the same, however. For this reason we have characterized modern French population theory as neo-mercantilistic. It is mercantilistic, too, as we shall indicate later, in that natality is looked upon as a function of the cultural system within which the individual moves, and therefore as susceptible of stimulation.

In summary, it may be said that the current alarm at depopulation, while not the first in the historical experience of France, is the most intensive and protracted in the history of France; for the causes of the post-1800 decline in the rate of increase have not proven responsive to changing conditions or to efforts to check their operation. The current fear of depopulation first manifested itself in the middle of the nineteenth century when war, epidemic diseases, and dearth temporarily but greatly reduced the quinquennial absolute and relative rate of increase and produced, in 1854-55, an excess of deaths over births. Fed first by the fact that the secular decline in the rate of natural increase continued and that the union of disunited Germany into one nation was establishing a growing and powerful country next to France, and secondly by the fact that Germany's triumph over France coupled with the continuation of France's relative demographic decline had shifted the military hegemony of Europe from France to Germany, this alarm grew steadily in volume and gave rise to a vast amount of depopulationist literature and to many proposals designed to correct the current demographic trend. By the end of the century those in favor of anti-depopulationist policies had become organized into groups whose number and power have since grown. Early in the present century official governmental investigations of the problem and of allegedly corrective measures began to be made. By the end of the third decade of the present century, as we show in a later chapter, many public and private policies had been introduced in an effort to halt the decline in the rate of increase. Moreover, during much of the late nineteenth and the present century, as we show in a subsequent chapter, various French policies were shaped in large part by the prevailing demographic trends within the country.

CHAPTER VII

FRENCH EXPLANATIONS OF THE CAUSES OF THE DECLINE IN NATALITY

In this chapter we shall summarize the theories advanced by French writers in explanation of the decline in natality. We shall not evaluate these theories, reserving implicit appraisal to the closing chapter. In Chapters III and IV we have already indicated certain conditions with which the decline in natality seems to have been associated; in Chapter XI we indicate certain alleged causes of the decline not here discussed.

The French explanations of the decline may be placed in one of three categories:[1] (a) those which run in terms of invol-

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[1] Certain explanations, most of them unimportant, do not fit within this threefold classificatory scheme. The decline in natality, for example, has been attributed both to the frequency of divorce and to the inability of many to obtain a divorce or annulment of marriage; to the prevalence of concubinage and free unions; to legal conditions which have made, or do make, the contraction of marriage at an early age difficult; and to religious celibacy (L. Le Fort advocated that the French government permit the establishment of no more nunneries and monasteries, *R.d.d.m.*, May 15, 1867, pp. 475-77). In the *Dolls of Paris* Pierre Colmette attributed the decline in part to the French custom of playing with dolls, a custom which, however, Freudians attribute to the low birth rate on the theory that playing with dolls offers an outlet for thwarted maternal emotions (*New York Times*, Jan. 25 and Feb. 10, 1924). The decline has even been attributed to the alleged sterility-producing effect of absinthe (*Time*, Sept. 17, 1934, p. 2), to the coddling of French poodles, and to the effect of bicycle riding upon the female generative organs (see A. Fouillée, *Psychologie du peuple français*, Paris, 1899, 8th ed., 1927, p. 298, note).

Of more significance are the theories of those who associate the decline with the growth of *étatism*, alcoholic consumption, and the effects of the Napoleonic wars. The first of these theories was advanced by J. Bouvron (*L'Europe malthusienne*, Paris, 1923, pp. 9-10), who said that potential parents procreated few or no children because children are no longer necessary to care for parents in their old age, inasmuch as the state provides care for the aged in the form of social insurance, old-age pensions, etc. Whence it followed, said Bouvron, that in the long run the *étatistic* pro-natality policies of Bertillon and others would depress natality. With respect to alcoholic consumption it may be said that although excessive infant and tubercular mortality and inability to procreate healthy children have been ascribed to excessive consumption of alcohol, the data on per capita consumption of alcohol suggest no convincing relationship over extensive areas, or over extended periods of time, between such consumption and mortality and natality untary sterility; (b) those of Malthusian tenor which emphasize the failure of economic production to expand as rapidly as it might; (c) those which explain the decline in terms of human volition and trace the motivation to restrict family size either to institutions somewhat peculiar to France, or to institutions and conditions peculiar to the modern Western world and its culture. Theories of class (c) may be subdivided in turn into the unified explanations associated with the names of Le Play, Dumont, and Leroy-Beaulieu, and into the nonunified and eclectic explanations formulated by various French writers on population. Few, if any, French writers have subscribed wholly to any one of the above classes of theories; most of them have assigned little or no weight to class (a), emphasizing instead aspects of (b) and (c).

The three classes of explanations of the decline in natality differ with respect to the importance attached to practices designed to prevent conception or its fruition. Writers who have subscribed to theories falling under class (a) have attached importance to such practices only in proportion as they have supposed man to be more prone to resort to contraception and abortion in virtue of the weakening of his so-called "genetic instinct." Writers who have subscribed to theories classed under (b) and (c), on the contrary, have had to give great weight to the practices of contraception and abortion. For the individual will to limit procreation, while traceable ultimately to numerous elements that make up the French cultural complex, can achieve this objective only through abstention from marriage and sexual relations, or through recourse to practices designed to prevent conception and its fruition. Accordingly,

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levels. That the wars of 1793-1815 depressed subsequent natality, as some writers held (e.g., F. de Ivernois, cited by Malthus, *Essay*, 6th ed., p. 183; M. Bonnal and F. Passy, *Annales*, XV, 1885-87, 163-64; F. Martin, *J.R.S.S.*, XL, 1877, 612), is self-evident. Between 1801 and 1815 the absolute number of births per year ranged between 884,000 and 994,000; about 1780 they slightly exceeded one million, Levasseur estimates (I, 272). Therefore, natality must have been lower in subsequent years when those born in the war years reached adulthood than it would have been had there been no wartime depression of natality. The depressive effect of the low wartime natality should have approached a negligible value in the later part of the nineteenth century, however.

the exponents of theories (b) and (c), noting that deferment of marriage and abstention from marriage and sexual relations have not sufficed to account for the decline in natality, have been compelled to stress the importance of conception- and birth-preventing practices.

In the opinion of the exponents of theories (b) and (c) the major immediate checks to French natality during the past century and a half have been onanism, abortion, the use of contraceptives, and to some extent deferment of marriage. Infanticide has always been quantitatively unimportant. The available evidence, although by no means sufficient to permit a precise answer, suggests that onanism long has been, and until recently was, a very important if not the most important immediate check to French natality. By 1850 or earlier recourse to abortion apparently had become an important check, especially in urban centers. Contraceptive practices, although known somewhat prior to the nineteenth century, apparently did not become quantitatively important until the closing third of the nineteenth century, when their quality was improved and knowledge of them became widely diffused. Practices designed to limit family size seem to have become diffused throughout the French population as silently and unostentatiously as the desire to limit family size. For while deferment of marriage and prudence within marriage and (in some instances) onanism were advocated by many nineteenth-century French writers, and while certain public officials and quasi-public bodies counseled sexual prudence and offered prizes to stimulate such prudence, no organized neo-Malthusian movement developed until the middle eighteen-nineties, long after French natality had fallen to a low level. Moreover, this movement was weakened by anti-birth-control legislation enacted in 1920. At present French private morality almost universally sanctions birth-limiting practices, even preventing the legislation of 1920 from fully attaining its rather limited objective, the suppression of neo-Malthusian propaganda.[2]

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[2] For a detailed historical account of the practice of family limitation in France and of laws pertaining thereto see articles by writer, *Marriage Hygiene*, May and Aug., 1936. See also Chapter X, note 48, below.

Repopulationist and pro-natality programs necessarily reflect the theories of natality-decline of their exponents. Given theory (a), that the decline in natality is due primarily to the biological and physiological condition of the population, natality can be elevated only through the control of certain diseases, the improvement of the health and physical environment of the population, and the promotion of certain types of racial intermixture. Given theory (b), major importance will be attached to measures that serve to increase the production of goods and services. Given theory (c), it follows that natality can be elevated by eliminating from the French cultural complex those factors which conduce to family limitation and by strengthening those factors with which the desire to procreate is associated. Of the three classes of theories, the last offers the strongest arguments in support of the efficacy of pro-natality measures, as we shall indicate later. The remainder of this chapter will be devoted to a summarization of the three classes of theories.

(a) Involuntary Sterility

According to the exponents of theories falling within this category, the lowness of French natality is directly and indirectly attributable in whole or in part to incapacity to procreate—an incapacity which, according to some writers, has been increasing. This incapacity may be either complete or partial. The principal alleged causes are: venereal disease, racial intermixture, and the allegedly depressive effect exerted upon natural fecundity by certain environmental conditions associated with the development of modern civilization. Concerning the first of these causes of infertility, venereal disease, it is sufficient to say that while French writers attribute some infant mortality and infertility to venereal infections,[3] they apparently do not consider such infections a principal cause of the relative lowness of French natality.[4]

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[3] E.g., see M. Fournier, *Bulletin*, 2d ser., XIV (1885), 284-99; C. Foa, *Proceedings*, II, 12-13; A. Smireday (*ibid.*, pp. 57-70), who believes that the frequency of venereal infection has increased since 1920.

[4] See, however, Alfred Fabre-Luce (*Pour une politique sexuelle*, Paris, 1929) who believes an anti-syphilis campaign to be the best means of elevating natality. Each year about 80,000 (about 0.4 per cent of the population of

The proposition that racial intermixture is responsible for the decline in French natality has been developed at greatest length by V. de Lapouge, whose emphasis upon the racial factor in civilization resembles that of Gobineau and other mid-nineteenth century racial theorists.[5] Lapouge attributed the decline of French natality to racial hybridism which, he asserted, had proceeded so far in France as to make the elevation of natality very difficult. The factors usually advanced to explain the decline in natality were either of secondary importance or traceable to racial intermixture. Infertility, in so far as it was "voluntary," was attributable to the rise of Christianity and to the decay of the "family instinct," a decay that in turn was associated with racial hybridization. He contended that "fecundity is proportional to the purity of the race, and to the state of stability of local cross-breeding"; that infecundity characterizes the offspring of "two human types whose origins are specifically or perhaps generically different"; that "cross-breeding is the cause of relative or radical infecundity of certain unions"; and that fecundity is greatest in departments where brachycephalic or dolichocephalic rather than intermediate types are numerically dominant. Nevertheless, he admitted that although the increase in infertility was traceable to biological selection, this selection in turn was shaped by social and nonbiological factors, by what Dumont called "social capillarity."

> Social capillarity produces an incessant sorting of ethnic elements, and the diverse groups differ at a given time in their social situation, their aptitudes, and their natality, in such a fashion that economic selections cause in the anthropological composition of classes and of societies a rapid and considerable change. We shall see shortly by figures how intense is the movement of concentration and of elimination of the dolichocephals. If order is not established there, the plutocratic regime will lead straight to imbecility the peoples who

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procreative age) contract syphilis (F. Boverat, *L'effondrement de la natalité*, p. 52). A. Roubakine (*La grande réforme*, March, 1935) estimates that 8-10 per cent of the French population are or have been afflicted with syphilis. Other estimates range between 15 and 30 per cent (Pierreville, *op. cit.*, pp. 208-12).

[5] Concerning the racial theorists see P. Sorokin, *Contemporary Sociological Theories* (New York, 1928), chap. v.

practice it, those of whom we form a part. The social element, upon the entire destruction of which economic selections are bent, is in effect, the intellectual aristocracy, or rather all who are not psychically plebeians.[6]

French demographers have not been sympathetic to racial theories, despite the prestige of Lapouge. Little weight has been accorded to his analysis of the cause of "denatality." Moreover, Corrado Gini's somewhat similar biological explanation of the decline of French natality has been rejected by leading French demographers.[7] J. Bourdon has even asserted that Professor Gini's theory is designed to justify Italian expansion and to undermine French and Anglo-Saxon efforts to preserve a demographic and political status quo.[8]

Herbert Spencer's thesis that as man becomes more individuated, either through ascension into the upper classes or through the general progress of civilization, his procreative power is diminished by the diversion of energy from reproductive to other uses was anticipated by several early nineteenth-century French writers[9] and was accepted in part by a number of late nineteenth-century writers.[10] Some, like De Candolle, sought to explain the comparative lowness of natality in the upper classes by Spencer's theory, thus ignoring the effect of social selection upon fertility by class.[11] Others saw in Spencer's thesis a partial explanation of the general decline in natality. Yet others believed that, as a result of selection and environmental changes, "nervousness" was increasing and depressing natural fecundity; that, as the frequency of involuntary abortion suggested, strenuous social life was rendering women less fit for childbearing; that overalimentation and lack of balance in diet were producing sterility.[12]

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[6] See *Les sélections sociales* (Paris, 1896), pp. 188-92, 344-45; *R.d.e.p.*, IX (1895), 1002-29; X (1896), 132-46.

[7] E.g., see E. Jordan, *Pour la vie*, March, 1933.

[8] *R.d.e.p.*, XLVII (1933), 1608-09. Gini maintains among other things: (a) that the reproductive power and "genetic instinct" of peoples rise and fall; (b) that the reproductive power of the French people has declined, as is evidenced in part by the decline in the frequency of births among those married a year or less; (c) that the French, in contrast wtih the prolific French-Canadians, have subjected their women to "intensive selection based on personal beauty which . . . in all probability, exercises an anti-selective influence on fecundity." See *Eugenics Review*, XVII (1928), 261; *Population* (Chicago, 1930), especially pp. 69-77; *Le basi scientifiche della politica della popolazione* (Rome, 1931), chaps. ix-x.

[9] See our discussion of Fourier, Renaud, and Proudhon, *J.P.E.*, XLIV (1936), 749-53.

[10] Among the French writers who subscribed in part to this theory, we may mention: A. de Candolle (*Histoire des sciences et des savants depuis deux siècles*, Geneva, 1873); P. Jacoby (*Études sur la sélection dans ses rapports avec l'hérédité chez l'homme*, Paris, 1881); A. Fouillée (*Psychologie*, pp. 297-301, 351-53); G. Delaunay ("La Fecondité" in *Revue scientifique*, Oct. 3 and 10, 1885); E. Maurel (*De la dépopulation en France*, 1896); as well as a number of economic and sociological writers (e.g., C. Gide, H. Secrétan, A. Comte, A. Courcelle-Seneuil). See our discussion in *J.P.E.* (1936), cited above; also views summarized in E. Van Der Smissen, *La population* (Brussels, 1893), pp. 406-18.

In general, however, French demographers have clung to the view that the major cause of the decline in natality has been voluntary control of family size. For while 6 to 15 per cent of all marriages have been estimated to be involuntarily sterile,[13] less than one couple in ten among those married five or more years was childless in 1906. Moreover, the frequency of childlessness varies more from department to department than is consistent with a theory of widespread increase in involuntary sterility. Besides, as Bertillon and Gonnard found, absolute sterility was no greater in France than in other countries, and had not increased during a fifty-year period marked by a 15 per cent decline in natality.[14]

(b) Malthusian Explanation

We classify as Malthusians those writers who found the main check to French natality and natural increase in the failure of the French people to utilize its economic resources effectively. This classification is somewhat arbitrary in that the writers who represent this view did suppose a rising standard of living which operated to check population growth; they differ, however, from the writers included in class (c) in that they placed much greater emphasis upon factors which served to check the augmentation of production. Most representative of this view were De Lavergne, De Molinari, Cauderlier, and Lascaux. Representative also were the out-and-out disciples of Malthus, who differed from the writers named, however, in their implicit supposition that depopulation was impossible, a supposition specifically denied by Malthus in the first edition of his *Essay*.

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[11] See R. A. Fisher, *The Genetical Theory of Natural Selection* (Oxford, 1930), chap. xi, for an explanation of upper-class infertility in terms of socio-biological selection.

[12] E.g., see J. Rochard and M. Roussy, *Bulletin*, 2d ser., XIV (1885), 74-75, 81, 118-19, 158; also Fouillée, *Psychologie*, pp. 297-99; Van Der Smissen, *op. cit.*, pp. 407-69; Gonnard, *Dépopulation*, pp. 53-60, 104-07.

[13] F. Jayle, *Bulletin*, 2d ser., LXXVIII (1917), 3; C. Richet, *ibid.*, LXXVII (1917), 614; Richet and Pinard, *Rapport sur les causes physiologiques de la diminution de la natalité en France* (Paris, 1903), p. 10; A Fouillée, *Psychologie*, pp. 297-98.

[14] See Gonnard, *R.d.e.p.*, XIV (1900), 629; Bertillon, *Dépopulation*, pp. 90-94, 200-01. See the writer's comments on the theory of involuntary sterility in *Journal of Heredity*, XXI (1930), 434-35; *Marriage Hygiene* (Aug., 1935), pp. 52-53. Recently J. A. Lindsay argued that since French natality had declined before birth control was known, the decline was due in part to infecundity (*Scientia*, XLVII, 1930, 265). Means of curtailing family size were known, however.

De Lavergne and De Molinari found the major checks to economic progress and population growth in governmental policies and in departures from laissez faire. De Lavergne denied that overpopulation was the cause of France's slow demographic growth, citing as evidence of the absence of overpopulation the fact that the average length of life was less in France than in more densely populated England and Belgium.[15] The real cause of France's slow demographic growth lay in the diversion of resources through governmental fiscal policy into unproductive public works and military establishments; in the business uncertainty and other checks to commerce and industry occasioned by the revolutionary tendencies prevalent in the late 1840's; in unemployment traceable to a temporary lack of balance between agriculture and industry and to internal migratory movements; and in the inadequate development of agriculture.[16]

G. de Molinari, both a critic and a disciple of Malthus, believed that the birth rate had fallen because the cost of raising children had risen, because the economic utility of children had been diminished by child labor and conscription laws, and because the economic productivity of France had been held in check by unproductive governmental expenditures, by market instability, and by interferences with laissez faire (e.g., tariffs, monopolies, certain taxes). He believed that taxation for the purpose of subsidizing large families would foster dysgenic selection and impoverish the nation and yet not raise natality. He proposed the establishment of institutions to extend credit to parents and potential parents, repayment ultimately to be made if necessary out of the income of the children whose procreation had thus been financed. Such a scheme, he apparently believed, would function within the framework of a competitive price system, and lead to the production of an adequate number of biologically sound offspring,[17] inasmuch as credit would be forthcoming to healthy potential parents only so long as it was likely that the offspring thus financed could find lucrative employment.

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[15] T. Fix also considered the average length of life to be an index of prosperity. See *J.d.e.*, 1st ser., X (1845), 20-21.

[16] J. Valserres estimated that France could support about 20 millions more persons were her agricultural resources properly developed (*J.d.e.*, 4th ser., III, 1878, 332-52). De Lavergne's opinions appeared in the *R.d.d.m.* (July 1, 1855), 210-11; (April 1, 1857), 480, 493, 498, 501; *J.d.e.*, 2d ser., XIV (1857), 375-76, 3d ser., XLIII (1876), 293-97, XLV (1877), 125-29. See also L. Say, referred to in Chapter V, note 2.

G. Cauderlier, a Belgian critic of the "social capillarity" and "civilization" theories described below, said that size of a population was governed by "the resources that the population draws from its work or from the work of anterior generations" and by "the average value of the needs of life to which these resources must give satisfaction." It followed, therefore, that since needs vary slowly, "population varies according to the disposable resources, . . . according to economic conditions"; that population tends to grow most rapidly where the source of income is relatively unlimited (e.g., in areas dependent on fishing, on mineral extraction, on commerce) and least where the source of income is limited (e.g., pastoral, agricultural, and mountainous areas); that civilization checks population growth through increasing needs and through fostering urbanization; that centralization of government, public services, etc., checks population growth by attracting the forces of intelligence to the cities and thus reducing the growth of wealth in the provinces and in the country as a whole; that laws and celibacy cannot influence population growth if they influence neither needs nor the production of wealth; that changes in mortality affect total population only in proportion as they affect total production or needs; that alcoholism retards population growth through augmenting needs and decreasing productive efficiency; that France can raise her natality through checking urban growth and alcoholism, through removing checks to production (e.g., tariffs, taxes, etc.), through diminishing needs, and through reducing the mortality of those of productive age.[18]

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[17] *Viriculture* (Paris, 1897), Preface, pp. 90-100, 145, 152-53; *Ultima verba* (Paris, 1911), pp. 151-56; *J.R.S.S.*, L (1887), 183-96; *Annales*, X (1873-74), 52. For similar opinions see *Annales*, X, 54-55; *J.d.e.*, 6th ser., XXXIV (1912), 525-26; *A.s.m.p.*, CLXXIX (1913), 490.

Lascaux attributed the lowness of French natality, not to increased luxury consumption or to a decline in religious or familial spirit, but to the low level of French production which, in turn, reflected the "inconceivable incapacity of the French élite" who (rather than the masses) were responsible for the way in which the French economy was organized and conducted.[19] "A species possesses a number of representatives proportional to the means of subsistence that it is able to procure."[20] Population depends upon production, which in turn depends, as does employment, on the supply and composition of a country's capital. Excess infant mortality cuts down births in excess of the "optimum" number which allows each child "the minimum hygienic needs for a healthy and hygienic life." Natural increase can be fostered only by making possible a higher "optimum," by increasing the supply of necessities. Subventions to large families and expenditures to curtail mortality do not increase production but waste a country's resources and thus reduce its capacity to support population. As means to increase population he recommended augmenting the supply of capital for domestic use through saving and through the prohibition of capital exports; the direction of this capital, possibly through the use of state subsidies, into necessity-producing industries and into agriculture; the improvement of French agronomy and the enlargement of French farms; the removal of state subventions to weak industries and of barriers to the free importation of necessities; the regulation of consumption in ways designed to assure to each as much as, and apparently little more than, was warranted by hygienic science; and the encouragement of the immigration of foreign labor. Rational use of her resources, he said, would enable France to increase her population by ten millions.[21]

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[18] Population increased or decreased in response to an increase or decrease in the supply of disposable resources, Cauderlier believed, not through changes in marital fertility, but through an increase or decrease, respectively, in the relative number of marriages and in the relative number of net immigrants. He thus refused to accept the argument of those who said that emigration to the colonies would appreciably influence family size. (See *Les lois de la population et leur application à la Belgique*, Brussels, 1899, pp. 163-75, 233-40; *Les lois de la population en France*, Paris, 1902, pp. 3-21, 116.)

[19] *La production et la population* (Paris, 1921), pp. 10, 23-24, 33-36, 199, 324. Chéradame (*op. cit.*, pp. xii-xiv of Preface to 1925 ed.) said France could save herself by creating an élite of 100,000 to reform the nation politically and intellectually.

[20] *Op. cit.*, p. 35.

O. Effertz, a German whose opinions were influential in France, expressed views somewhat similar to those of Lascaux nearly a decade earlier. He believed that whereas production on land is ultimately subject to diminishing returns, production in other lines of economic activity is subject to constant or to increasing per capita returns. He supposed that a designated, scientifically determined quantum of land products would suffice to support the physiological needs of the average person. He estimated, therefore, that even if France were on a self-sufficient basis she could support a population equal to the agricultural productivity of France divided by this scientifically determined necessary quantum of land products; for the population would be plentifully supplied with goods made primarily of labor. He said that France's agricultural production had increased enough between 1870 and about 1910 to permit her to support 50 millions; that agricultural production and population capacity could be increased even more through utilizing land released from cultivation by the substitution of automobiles for horses, and through discontinuing the culture of grapes which tended to deplete the fertility of the soil; that population capacity could be increased further by exchanging products made of labor for foreign goods produced primarily on land. He believed that since France was capable of supporting a larger population than lived on French soil, it would pay the state to establish asylums for children and take over the potential children of parents who were resorting to abortion.[22]

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[21] *Ibid.*, pp. 83-87, 198-200, 293, 301-02, 321-22, 330-34.

(c) Volitional Theories

French explanations of the decline in natality which stress the role of human volition are classifiable into unified and nonunified theories. The unified theories include: (1) the theory of Le Play, who laid major stress upon the French inheritance law; (2) the theory of Dumont, who emphasized what he called "social capillarity"; and (3) the theory of Paul Leroy-Beaulieu, who associated the decline in natality with the development of what he called "civilization." Under the head of what has been called the nonunified volitional theory we group the various factors which, according to French writers, have been associated with the increase in motivation to curb fertility.

Of these volitional theories none has been more discussed than that popularized by Le Play and emphasized to this day by the two French sociological schools which stem from Le Play.[23] According to Le Play and his followers, the decline in natality is traceable ultimately to familial instability, which had its origin in France in the diffusion of the principles of the

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[22] *R.d.e.p.*, XXVIII (1914), 129-52. Cantillon and several of his disciples set forth views somewhat analogous to those of Effertz in the eighteenth century.

[23] Le Play's principal works are *La réforme sociale en France* (Paris, 1866); *Les ouvriers Européens* (Paris, 1879). Le Play's followers split after his death in 1885 into the La Réforme Sociale group, which adhered to his methods and to his faith in tradition, and the La Science Sociale group, which stressed individual responsibility (see G. Pirou, *Les doctrines économiques en France depuis 1870*, Paris, 1925, pp. 133-39). Each group, however, has accepted Le Play's demographic principles. Thus E. Demolins, leader of the latter group, has attributed the lowness of French natality to the Code Civil and to the compulsion French parents feel to dower each child in order to secure its marriage. He believed that a low birth was directly and indirectly injurious to a nation, undermining a nation's expansive powers and prestige, and increasing the relative number of small families wherein children are pampered and not stimulated to be thrifty and enterprising. Demolins was opposed to stateism and governmental centralization; he advocated modification of the Code Civil and an educational system that would inculcate religion and morality. See *Anglo-Saxon Superiority* (pp. 106-25), translated from the tenth French edition of *À quoi tient la supériorité des Anglo-Saxons*, first published in 1897. See also E. Usquin, *La dépopulation des campagnes* (Paris, 1910), pp. 105, 109, 121-24.

French Revolution and in the establishment of those provisions of the French Civil Code which require parents to bequeath at death to each child at least a specified proportion of the property owned by parents.[24] Social stability and cohesion, Le Play believed, presuppose the continuation of long-tested customs and of the bases whereupon such customs rest, namely, a universal moral code and parental authority co-ordinated by religion and the principle of sovereignty. Social stability, in turn, implies familial stability and adequate natality. Social stability had been undermined by the substitution of the principles of the French Revolution for those which Le Play deemed essential to societal cohesion. Familial stability, which presupposes both societal stability and the full operation of the principle of parental authority, had been greatly weakened as a consequence of general societal instability and of the partial destruction of parental authority by the inheritance provisions of the Civil Code.

Le Play distinguished three types of family organization, the pastoral or patriarchal family, the stem-family *(famille-souche)*, and the instable family. The stem-family, in many respects similar to the patriarchal family, constitutes, according to Le Play, a stable, permanent, powerful organization, capable of protecting its members in times of stress. In this type of family, consisting at times of as many as a score of persons, we usually find associated with the parents an elder son, generally married, some of the unmarried children, and the domestics. The immobile property—e.g., the agricultural property—eventually goes to the eldest son, who is associated with the parents, the other children receiving doweries which, in the case of those who remain at home, may be combined with the agricultural capital of the parents and the eldest son. Thus there always exists a haven to which the unfortunate members of the family may return. Moreover, in this type of family the father retains a just measure of authority; respect for state and religion and tradition is cultivated but not to the complete exclusion of love for the new; and habits of work and thrift are inculcated. The children, other than the eldest, receive a *dot* and seek a livelihood in the army, at sea, in colonies, in industry, etc.[25] The familial milieu is favorable to natality.

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[24] The Convention of 1793, many members of which wished to abolish entail, primogeniture, and the aristocracy, fixed upon a smaller disposable proportion of property than was allowed under the Code. The Code, as made effective in 1804, fixed at one-half, one-third, and one-fourth, respectively, the proportion of a parent's property of which he could dispose as he saw fit, if he had one, two, three or more children; the balance had to be divided equally among the heirs. Other provisions of the Code did not permit much modification of these requirements. In 1806, under Napoleon, the right of entail for state dignitaries was restored; this right was abolished in 1835 (Raisin, *op. cit.*, p. 176). On the formation of the inheritance provisions of the Code see Sagnac, pp. 214-39, 347-54.

In the instable family, common to Western industrial countries, an opposite set of conditions unfavorable to natality is found. For in this type of family there is no material and authoritarian basis for familial solidarity. This type is founded merely upon the union of spouses. Parental authority is limited and transitory. There is no provision to place the parental homestead under the control of one of the children and preserve it as the family hearth to which other members of the family may return, particularly when in distress. This type of family begins to break up when the children, each free to spend his *dot*, begin to leave the parental homestead; it usually terminates when the property of the parents is divided among the children before or upon the death of the parents.

Le Play attributed the rise and spread of the instable family in France to the substitution, in 1793, of the new and revolutionary enforced division of parental property for "the old custom which maintained the integral transmission of property and the fecundity of marriage."[26] For, given the new restrictions upon testamentary freedom, the owner of agricultural property was compelled to limit the size of his family if he would avoid subdivision of his land or transmit his property as an integral unit.

Natality would be restored to a satisfactory level were the disposable portion of the parental estate appreciably increased or made coterminous with the property. For then the stem-family would tend to replace the instable family. Parental authority would be restored, and with it a milieu favorable to natality. The growth of egoism and irreligion and similar social traits would be checked. Parents would no longer need to curtail fertility to avoid subdividing landed property. The branch members of the stem-family would feel secure; for they could repair to the homestead in times of depression, unemployment, and distress. Nuptiality and natality would necessarily increase. Such, in sum, was Le Play's solution. In the hands of his disciples, however, this solution has been boiled down to advocacy of the restoration of testamentary freedom.

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[25] *Réforme sociale*, I, 244-50, 327-28. For a complete analysis of Le Play's views on the family and on living standards see C. C. Zimmerman, *Consumption and Standards of Living* (New York, 1936); *Family and Society* (New York, 1935).

[26] *Réforme sociale*, I, 459.

In support of their thesis that denatality is attributable to the lack of testamentary freedom Le Play and his disciples offer four types of proof. They assert, first, that the decline in natality set in *after* the French Revolution and the restriction of testamentary liberty. They have sought to show, second, that natality has declined least in those sections of France where, despite the Code Civil, local customs have favored joint ownership and the integral transmission of property.[27] They point, third, to the common assertion of French peasants that they limit family size to avoid subdividing the land.[28] It is alleged, finally, that the inheritance provisions of the Code Civil have operated to modify ancient French customs, thus rendering the population less prone to have many children.[29] Although these arguments have been repeated many times and persistent efforts have been made to secure a modification of the Code Provisions, little has been accomplished by the advocates of testamentary freedom.[30]

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[27] See A. de Brandt, *Droit et coutumes des populations rurales;* Auburtin, *La natalité*, pp. 144-62, who summarizes four detailed monographs on families and very small communities; also Jules Jung, *Moyens . . . Proposés*, etc. (Paris, 1904), pp. 106, 119-20; S. Lauzanne, *Current History*, XIX (1923-24), 412; R. de Felice, *Naissances en France*, pp. 196-208. Felice, however, presents other data at variance with this view.

[28] That the peasants so assert is well attested. E.g., see J. Valserres, *J.d.e.*, 4th ser., III (1878), 334; De Brandt, *op. cit.*, p. xii; H. L. Roth, *J.R.S.S.*, XLVIII (1885), 87-89; R. W. Rawson's citations of evidence accumulated by M. Cheysson and H. Baudrillart, *ibid.*, pp. 525 ff.; the opinions of Renan, Siegfried, and others cited by Auburtin, *op. cit.*, pp. 73, 162, 172; S. Lauzanne, *op. cit.*, p. 413; W. H. Scheifley, *North American Review*, CCX (1919), 763; P. Nogaro, *Revue bleue* (April 5, 1930), pp. 196-97. Fouillée even testifies (*Psychologie*, p. 312, note) that about 1891 French peasants sometimes introduced into the marriage contract the stipulation that but one child could be procreated and reared. See also Bertillon, pp. 107-09, 140-50. Anti-morcellement psychology is well described by L. Reymont in *The Peasants*, III, 120-21.

[29] A. de Brandt, who concluded that natality had diminished least in the regions where integral transmission of property was maintained through custom, remarked that "there is . . . a concatenation of phenomena and of reflections in which it is necessary to seek the point of departure in the change in the law on successions." The hereditary right established by the Code and its observation have gradually but steadily created the feeling that all children are equal and must be treated equally. This supposition that all are equal destroys the spirit of enterprise in the younger generation; it leads the father, who lacks confidence in the ability of his posterity to shift for themselves, to resign himself to the practice of limiting family size as the only means of securing an easy existence for his posterity (*op. cit.*, pp. 337-38). Le Play and his followers contend that during the pre-Revolutionary period the father exercised his right to transmit a large proportion of the property to one son, thus conserving "la terre et des maisons" and the stability of the family; that the Code Civil destroyed this paternal authority and integral transmission of property and thus destroyed the stability of the family; and that efforts to restrict the disposable proportion encountered great opposition. See summary of these arguments in F. Auburtin, *La natalité*, pp. 116-34.

[30] For a recent presentation of the Le Play argument see Auburtin, *En peril de mort* (Paris, 1929). Minor modifications of the inheritance provisions were made in 1894, 1908, and 1909 (Bertillon, pp. 149-50). Prior to 1894 all proposed modifications were rejected. After the revolution of 1848 it was proposed in the legislature (in 1849) to restore the law of the year VIII under which little favoritism could be shown any one child. During the reign of Napoleon III, who was much impressed with Le Play's views, M. le baron de Veauce introduced a bill to provide complete testamentary liberty for the father. Although 51 of the baron's colleagues supported the bill, it was defeated by a coalition. See A. Colin and H. Capitant, *Cours élémentaire de droit civil français* (Paris, 1929), III, 704-05. In 1919, 1920, and 1922 unsuccessful attempts were made to increase the disposable portion and to increase the right of joint ownership, these rights to be conditioned in part on the size of family. Following the acquisition of Alsace-Lorraine, where despite the German Code most of the landed properties included less than two hectares (*R.d.e.p.*, XXXVIII, 1924, p. 1061), certain elements of the German Code were retained for the purpose of protecting the integrity of property (*R.S.*, 1922, pp. 439 ff., 707 ff.; 1925, pp. 131-33; 1926, pp. 441 ff.). In 1894 and 1898 efforts were made to establish an inalienable and unseizable family homestead of not over 12,000 franc value (Jung, *op. cit.*, pp. 153-65). M. Doucet in 1901 (*R.p. et p.*, Jan., 1901, pp. 140-154), on the basis of the Roman law of Augustus, proposed that childless adult heirs suffer smaller shares under certain circumstances. In 1902 Colonel G. Toutée proposed that the portion of an heir be governed by the size of his family and that where there was but one heir, one-half the estate only be allotted to him. (For an appraisal of these proposals see Worms, pp. 173-90, of work cited in note 31, who accepts Toutée's pro-

Before we examine the arguments of the Le Play school we shall review criticisms of the inheritance provisions of the Code advanced by predecessors of Le Play. These criticisms were directed at both the demographic and the non-demographic effects and anticipated effects of restrictions upon testamentary freedom; many were presented in the Constituent Assembly and the Convention when new inheritance laws were first introduced. Thus Cazales stated in 1791 that the abolition of testamentary freedom would check population growth, inasmuch as the father, if compelled to give each child as much property as the eldest, would limit the number of younger children. Cazales proposed, therefore, that the father be empowered to bequeath, as he saw fit, two-thirds or one-half of his property, depending upon the number of his children.[31] Raudot, a Catholic and a critic of the French Revolution, in 1857 named the French inheritance law as one of the causes of the slowness of French demographic growth.[32] The followers of the French Physiocrats, advocates of large-scale farming, apparently feared the evil effects of subdivision of the land upon agricultural efficiency—evil effects many times stressed by students of French agriculture.[33] A. Comte defended testamentary freedom on the

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posals, if introduced experimentally, as a democratic means of favoring natality.) In 1918 M. Bokanowski proposed that in families of less than four children the state share as one of the children in the succession (*R.p. et p.*, XCIV, 1918, 290). See J. Ferrand, *Des réformes successorales* (1908) for a proposal to make a portion of the family property nonalienable. At present, proposals to increase testamentary freedom come primarily from the pro-natality organizations.

[31] See R. Worms, *Natalité et régime successoral* (Paris, 1917), pp. 119-23. M. Javal cited an English writer who remarked in 1808 that the Code Civil condemns France "to diminish without cessation: within a century she will no longer exist" (*Bulletin*, 3d ser., XXIV, 1890, 336).

[32] *Le correspondant* (May, 1857), p. 56.

[33] Morcellement of land and capital, said T. Guiraudet in 1792, would deprive farmers of "the advantages of large scale cultivation" (*De la famille*, Paris, 1792, pp. 114-18). Evidence of inefficiency in French agriculture (see R. G. Tugwell, *Political Science Quarterly*, XLV, 1930, 215 ff., 542) somewhat confirms Guiraudet's prophecy. In general, it is apparent that the inheritance provisions of the Code, though a motivator of agricultural cooperation and animal husbandry, have had certain evil effects: worthless children cannot be disinherited, able children cannot be adequately rewarded; the Code provisions compel the disintegration or the too rapid sale of property that should, in order to retain its value, be kept intact or sold slowly; the pulverization of landed property makes for inefficient agriculture. See H. L.

ground that a father had the right to designate the continuer of his personality who, in order to perform this function, needed to inherit the parent's property and social position.[34]

The arguments of Le Play and his disciples have been rejected in whole or in part by many French writers,[35] some of whose criticisms even antedate Le Play.[36] The critics of Le Play's theory maintain, first, that the establishment of the provisions of the Code Civil did not effect a complete change in French practices relative to inheritance, inasmuch as the Code provisions had been substantially in effect prior to the French Revolution.[37] Second, although the small farm system was

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Roth, *J.R.S.S.*, XLVIII (1885), 88-91; P. G. Craigie, *J.R.S.S.*, L (1887), 86-142; Earl Lovelace, *J.R.S.S.*, XI (1848), 111 ff.; Robert Dell, *Current History*, XIX (1923-24), 419; *R.S.*, various articles since 1920; F. de Saint-Genis, *La propriété rurale en France* (Paris, 1802); A. de Foville, *Le morcellement* (Paris, 1885); M. Augé-Laribé, *L'évolution de la France agricole* (Paris, 1912).

[34] Worms, *op. cit.*, pp. 119-23. Worms attributes the common dislike of Le Play and Comte for the Code Civil to their having undergone similar experiences (*ibid.*, pp. 123-28).

[35] E.g., Raisin, A. Legoyt, R. de Felice, Leroy-Beaulieu, R. Worms, A. Colin, E. Levasseur, De Lavergne. See also writers mentioned below; also Yves Guyot, *J.d.e.*, 6th ser., LXXV (1923), 107; G. Richard, *Proceedings*, IX, 433.

[36] Many eighteenth-century French (e.g., Montesquieu, D'Amilaville, Raynal, Goudar, Jaubert, Moheau) and non-French writers (e.g., Von Justi, Wallace, Filangeri) considered the right of the eldest son to the major part of the parental estate to be unfavorable to natality in that it focused the attention of the father upon but one child. Malthus and Arthur Young considered the small farm system conducive to natural increase. The latter also stressed its efficiency. In 1851 L. Wolowski denied that morcellement and the Code Civil were the causes of France's "decadence," saying that marriage recomposed property, that the Code reduced proletarianism, that one could accumulate capital and use it to agglomerate landed property if that were desirable, that small property had beneficial cultural and political effects, and that the Code Civil prevented the development of latifundia (*R.d.d.m.*, Aug. 1, 1851, pp. 640-67).

[37] Prior to the French Revolution, Roman law *(le droit écrit)* prevailed in Southern France; in the West and North 285 local codes (*le droit coutumier)* were in effect, the proportion of property of which the father had the right to dispose varying from region to region. See J. H. Robinson *et al.*, *A General History of Europe* (New York, 1925), pp. 420-21. The provisions written into the Code represent roughly an average of the provisions everywhere in effect prior to the Revolution. Colin and Capitant (*op. cit.*, pp. 703-04), who are well aware of the difficulties involved in making an exact comparison between the provisions of the Code and those in effect prior to the Revolution, conclude: "(1) that the disposable portion, under Roman law, was more extended than that of today; (2) that on the

fairly widespread before 1789 and the desire for land was pronounced, natality was high, and the small farm system was considered more favorable to natality than the system of large properties.[38] Third, the decline in natality did not begin immediately upon the adoption of the provisions incorporated in the Code Civil. Moreover, although the Code reduced the disposable portion of property more in departments where written law had prevailed than in departments where the disposable portion had been fixed by customary law, the birth rate declined about as much in the former as in the latter departments. Further, even in certain departments where the eldest son was

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contrary, under customary law, it was much more restricted. The customary reservation was otherwise more forcible than the modern reserve, with regard to quantity and to the number of reservations."

Concerning the difference between pre- and post-Revolutionary inheritance laws in France and their effects see Worms, *op. cit.*, pp. 78 ff.; Raisin, *op. cit.*, pp. 139 ff.; H. S. Maine, *Early History of Institutions* (London, 1875), pp. 119-26; A. Legoyt, *J.d.e.*, 2d ser., XIV (1857), 367-69; H. L. Roth, *J.R.S.S.*, XLVIII (1885), 86 ff.

[38] Worms, *op. cit.*, pp. 78-83; also note 36, above. Prior to the French Revolution small-sized properties were common in France; over one-third of the land was owned by small cultivators. Non-noble owners numbered about 4,000,000; in 1825 there were about 6,500,000 owners. See De Foville, *Morcellement;* J. B. Perkins, *France under Louis* XV (1899), I, chap. i, pp. 40-47; J. H. Clapham, *Economic Development of France and Germany, 1815-1914*, chap. i; L. Knowles, *Economic Journal*, XXIX, 6-8. That the land was pulverized is evident in that about one-half of the independently taxed pieces of land were small in the nineteenth century. In 1894 about three-fourths of the exploited land consisted of pieces of six or more hectares. See Raisin, *op. cit.*, pp. 165-67. The low birth rate and the diminution in the size of the rural population have somewhat checked pulverization, and the relative number of small holdings has decreased since 1894.

Both social scientists and literary men have attested to the persistent centuries-old thirst of the French peasant for more land. E.g., see Perkins, *op. cit.*, I, 41-47. Rabelais noted that parents placed children in monasteries and nunneries to avoid splitting up the land (cited by Anatole France, *Forum*, LXXX, 1928, 483-84). Balzac called the French peasant *"le démon de la propriété"* (see Usquin, *op. cit.*, p. 117). Zola, De Maupassant, and recently C. Braibant (*The Iron Mother*, New York, 1935) have depicted the grasping and intense desire of the peasant for wealth. G. J. S. Lefevre attributed the French peasant's desire for independence and his thrift to his passion for land (*J.R.S.S.*, XXXIX, 1876, 672). Both Lovelace (*ibid.*, XI, 1848, 318) and Roth (*ibid.*, XLVIII, 1885, 91) attributed to the peasant's avidity for land his willingness to borrow at as high as 8 per cent and purchase land at prices allowing a return of but 1-3 per cent on the money invested. Tugwell (*op. cit.*, pp. 215-19, 542) found as late as 1930 that the love of land and agriculture had persisted, peasants earning only one per cent on their investments in land.

favored or where the family community was preserved, natality fell, despite Le Play's thesis; in other departments where, on Le Play's theory, conditions were unfavorable to natality, it remained relatively high.[39] Fourth, only in certain parts of France did parents make use of the right to transmit the disposable portion to one heir; in general, they divided property equally for fear of creating family discord or of favoring some children at the expense of others.[40] Fifth, the great differences between natality levels in different parts of France could not be traced to one single cause, the Code Civil, which operated everywhere.[41] Sixth, there was no consistent correlation between the natality levels of foreign countries and the provisions of their inheritance laws. The birth rates of countries with inheritance laws similar to the French varied, in general exceeding that of France. One found high birth rates associated with both a subdivided and a nonsubdivided condition of agricultural property. Natality had fallen in England, where testamentary liberty prevailed, whereas in Russia, with the same liberty, it had not fallen.[42] Seventh, the decline in natality was attributable to egoism, to individualism, to the influence of civilization and well-being, to the desire to avoid reducing wealth when living rather than to a desire to avoid subdividing it after death, in general to psychological causes largely unassociated with any form of inheritance law.[43] Eighth, the fluctuations in natality, in reality traceable to economic and political conditions, could not be associated with the Code.[44] To these various criticisms one may add the further objection that French familial instability has had many causes, some of which were operating before 1789; that the changes in inheritance provisions after 1789 had their origin in much the same cultural conditions and changes as had familial instability as such.[45]

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[39] Raisin, *op. cit.*, pp. 136-62.

[40] Leroy-Beaulieu, *La question*, p. 409.

[41] Worms, *op. cit.*, pp. 183-88.

[42] *Ibid.*, pp. 88-92; Levasseur, III, 174-76; Raisin, *op. cit.*, pp. 102-18, 178; Yves-Guyot, *J.d.e.*, 6th ser., LXXV (1923), 107.

[43] Worms, *op. cit.*, p. 100; Levasseur, III, 176-77; Raisin, *op. cit.*, p. 179; Leroy-Beaulieu, *op. cit.*, pp. 409-13. Dumont, Gonnard, and all other writers who stress individualism, civilization, social capillarity, and psychological factors fall in this class.

[44] Lavergne, *L'agriculture et la population*, p. 457; Raisin, *op. cit.*, especially pp. 128-48; E. Maurel, *Causes de notre dépopulation* (Paris, 1902), pp. 457 ff.

The critics of Le Play denied that a modification of the Code Civil would lead to an increase in natality. First, the experience of other countries did not support this suggestion of Le Play, for a high natality was found only where religious ideas, family spirit, traditionalism, agricultural life, ignorance, and thoughtlessness persisted.[46] Second, despite the perseverance of Le Play and his disciples, no hostility to the Code Civil had developed; nor had many informed advocates of a higher natality advocated Le Play's program.[47] Third, there was no reason to suppose that the French would avail themselves of testamentary liberty even if it were granted, for Frenchmen, moved by love of children and attachment to the French tradition of relatively equal treatment of heirs, would continue to observe existing customs.[48] Finally, there was reason to suppose that testamentary liberty would depress natality. Testamentary liberty would not per se enable the parent to transmit the landed property to the eldest and yet provide independence for many other children. If the eldest received all or most of the property, the other children would be left with little or no property. Accordingly, there would be incentive to have but one child. Moreover, the transmission of the bulk of the property to the eldest child, or to one child, would tend to make him egoistic and thus check his inclination to have children.

> The extinction of the cadet branches would be probable; the survival of the eldest branches would be at the mercy of egoistic calculations and accidents. . . . There would be great risks of depopulation. . . . In wishing to conjure the crisis of natality, it is greatly to be feared that one would only succeed in aggravating it.[49]

The criticisms of Le Play's thesis require to be qualified and supplemented in several respects. First, even if Le Play's theory were an adequate explanation of the decline of French rural natality, it would not account for the decline in urban natality. Second, it does not suffice to say that peasants limit family size because they are averse to subdividing their land. Presumably, peasant attitudes are shaped by many factors. It is quite likely that the earlier establishment in France of conditions whereunder peasants could acquire land caused thrift to flourish there in a greater degree than in certain other lands, thus creating a milieu favorable to birth restriction. It is evident too that one who derives a living from land, the expansibility of whose area is relatively limited, is more aware of the restrictions on his capacity to increase his property than is one who is engaged in a commercial or industrial enterprise that seems to offer the possibility of expansion and of employment for the members of a large family. It may be, therefore, that agriculture, as pursued in France, may have helped to inculcate an awareness of limits to economic expansion and employment, more pronounced than that current among the more Faustian practitioners of commerce and industry.

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[45] See P. A. Sorokin, *Social and Cultural Dynamics*, III, 86-88, 92, 98-100, 109-11; C. C. Zimmerman, *Consumption and Standards of Living*, pp. 308-11.

[46] Worms, *op. cit.*, pp. 101-07, 138-39.

[47] *Ibid.*, pp. 144-45.

[48] *Ibid.*, pp. 111-12; Lavergne, *L'agriculture*, pp. 458 ff.

[49] Worms, *op. cit.*, p. 117; Lavergne, *op. cit.*, p. 457.

One may accept the Le Play thesis that denatality is associated with familial instability and yet deny that the preservation of greater testamentary freedom accounts for the French birth rate being higher in some regions, or that its restoration will elevate natality. For both familial instability and attitudes unfavorable to natality are associated with a great many factors making up the modern socio-economic cultural complex. The organization and functions of the family are shaped by political factors and by the manner in which goods and services are produced and distributed. Whence it follows that efforts directed solely to the establishment of the stem type of family organization, however suitable that type may be to an essentially agricultural economy, are bound to fail. The establishment of this type of family really presupposes a complete cultural revolution, not the mere establishment of testamentary freedom.

The complex nature of the cause of the decline in natality was more fully recognized by Arsène Dumont, antireligious and socialist demographer.[50] He attributed the decline to "social capillarity" (called "*bovarysme*" by J. de Gaultier), that is, to ambition to advance in socio-economic scale in contradistinction to mere effort to preserve present status or to retire early on a modest competence acquired through thrift.[51]

In an aristocracy, Dumont believed, natality in general would prove sufficient. The fertility of the common man would more than counterbalance oliganthropy, the historically attested "scourge of aristocracies, of the élite in possession of power, of fortune, of intelligence and high esthetic culture."[52] For in an aristocracy where most careers are open only to aristocrats, the common man is virtually free of the feeling of obligation to rise, of social capillarity. He seldom can aspire to rise, to develop in personal value, for but a limited number of the "better" nonaristocratic families are needed to fill the gaps made in the aristocracy by the oliganthropy peculiar to it. Therefore, in an aristocracy, the subalternized majority of the population, compelled to remain content with its familial lot, blindly pullulates.

In a political democracy, such as the French, on the contrary, it was to be expected that the desire to rise in socio-economic rank would be widespread, that an ascensional movement (i.e., social capillarity) would act almost everywhere as a depressant of natality. For in France men, in theory politically and legally equal, in fact were economically unequal. In France political democracy had universalized the manner of living and thinking, common to an aristocracy; it had made all men feel free to aspire to any employment, career, fortune, or honor. Economic inequality, however, had made it difficult for many to realize their aspirations. Procreation served to intensify these difficulties. Political and legal democracy inspired men to struggle to rise in the socio-economic pyramid to which economic inequality had given birth and in the upper reaches of which presumably the greatest happiness was to be found. The bulk of the population, therefore, not only strove to ascend politically, economically, socially, and intellectually, but experienced an imperative urge to climb and a palsying fear of descent. Consequently, since children impeded individual and familial ascension, their number was limited.[53]

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[50] Dumont made many careful studies of small groups to ascertain their attitude toward procreation and the reasons for this attitude. See files for 1888 and thereafter of the *Bulletin et mémoires de la société d'anthropologie de Paris*, the *Revue scientifique*, the *Mémoires de l'association pour l'avancement des sciences*, and the *Journal de la société de statistique de Paris*. His theories are best developed in *Dépopulation et civilisation* (Paris, 1890) and *Natalité et démocratie* (Paris, 1898).

[51] Several writers have stressed efforts of this latter sort and the alleged French fear of life's burden. E.g., see C. Richet, *R.d.d.m.* (June 1, 1882), pp. 587-616; F. Sauvoire-Jourdan, *La vitalité économique de la France avant et après la guerre* (Paris, 1918); S. E. Maurin, *Rapport des lois et des mœurs avec la population* (Paris, 1877), pp. 9-10; V. Giraud, *R.d.d.m.*, XX (1924), 383. See also Landry, below.

[52] *Natalité*, pp. 163-74. De Chateauneuf had demonstrated the demographic decline of the French nobility. See *J.d.e.*, 1st ser., XI (1845), 91-95.

Dumont summarized his theory in six propositions: (1) natality is inverse to social capillarity; (2) the progress of the individual in personal worth and enjoyment is a function of his social and economic ascent; (3) the development of the race in number and rationality is in inverse ratio to the development of the individual in worth and enjoyment; (4) the more brilliant a center of culture is and the more attraction it exercises, the more intense is social capillarity in the hinterland of that center of culture;[54] (5) the greater the relative intensity of the attractive forces impinging upon the individual, the more is he overpowered, as is evidenced in the fact that the plebeian sets himself a relatively higher ideal than the aristocrat and, accordingly, finds happiness less accessible; (6) a democracy such as the French inspires intensive viriculture, whereas a caste system gives rise to extensive viriculture.[55]

Dumont sought evidence for his theory in the variations of French natality from class to class and from place to place, variations which he attributed to variations in the intensity of the desire to rise. This intensity, in turn, was the product of the degree and the nature of the cultural influences impinging upon the specific members of a class or community. Natality was usually high and social capillarity low among those who, unable to speak French,[56] were unable to acquire new tastes and desires; and among industrial workers who realized that they could not become proprietors. Natality was high among fisherman-sailors; low among sailors of the fleet who had the potential opportunity of becoming noncommissioned officers. Among weavers natality had remained low so long as the domestic system prevailed and limits seemed to exist to a household's income; it had become high when the industry had become industrialized and the importance of home life and prudence had declined. Dumont found, moreover, that the fertility of agricultural workers who lived near the weavers and who viewed them as a superior class moved with that of the weavers, thus offering evidence of the contagiousness of the desire to control or not to control natality. Dumont found, too, that the more fixed and the less aleatory the income of the members of a class is, the more will fertility be controlled. He found emigration from rural communities to be both a cause and an effect of social capillarity.[57]

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[53] *Natalité*, pp. 174-86; *Dépopulation*, chaps. xi-xiv, pp. 106, 126, 258.

[54] Dumont here was referring to the centralizing pull of Paris, the generally assumed center of culture and wealth and power, and its intensification of mobility and social capillarity in France.

[55] *Dépopulation*, etc., pp. 130-31. P. Sorokin, who uses the term "vertical mobility" in place of "social capillarity," indicates that "social capillarity" is not as peculiar to democracies as Dumont suggests (*Social Mobility*, New York, 1927).

Dumont believed that France would profit were her natality higher and her population denser; that a fairly high natality was essential to assure individual, national, and racial self-preservation, efficient use of a nation's resources, and the development of desirable social traits. Social solidarity, courage, initiative, respect for parents, and civic and military spirit flourished in large families; egoism, caution, lack of enterprise in small families.[58] Eight marriages, 25 births, and 15 deaths per 1,000 inhabitants[59] would suffice, he believed.

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[56] The isolating effect of the Breton tongue and the Breton view that misery is "an hereditary incurable malady" are well described in *J.R.S.S.*, XIII (1850), 134-51.

[57] *Natalité*, pp. 190-91, 212-18, 224-26; *Dépopulation*, pp. 128, 183. In *Natalité au Massachusetts* (Nancy, 1898) he noted that the toxic principle of oliganthropy was operating in America, even though American conditions differed from those of France, and would "kill the Anglo-Saxon race and the children of immigrants." Relative to Malthus' theory Dumont said that it held for animals but not for man whose freedom and foresight could break the relation between sexual desire and fertility, and whose system of transmitting property destroyed the relation between personal worth and success (*Dépopulation*, p. 32).

An adequate number of births would be forthcoming, Dumont believed, given sufficient social reform, since the prevailing lowness of natality signified not physiological infertility[60] but (as Rousseau had said) socially corrupt customs.[61] He had no faith in charitable measures or legislative proposals, saying that they were futile so long as each was abandoned to his own resources.[62] It was necessary to diminish economic, intellectual, and other forms of inequality; to render excessive luxury impossible; in sum, to destroy social capillarity and the conditions giving rise to it. It was necessary to inspire courage, enterprise, and aesthetic values in men; to stress the collectivity rather than the individual; to vocationalize the educational system, make it foster production, habits of work, and the desire to marry and found a family. It was necessary to check urbanization, to decentralize France politically and culturally, by making available everywhere equal developmental opportunities. It was necessary, finally, to abolish Catholicism and belief in the supernatural, and to build individual and social life upon the findings of science. Given changes of this order, the population would become sufficiently immobile, social capillarity would disappear, and natality would rise to the proper level.[63]

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[58] *Natalité*, pp. 35-40; for a similar opinion see E. Durkheim, *Le suicide* (Paris, 1897), pp. 289-311.

[59] *Dépopulation*, pp. 517-18. Levasseur considered 25 births adequate (*R.p. et p.*, Oct., 1897, p. 18). C. Gide, who considered France's population to be below the "optimum density," advocated 2 children per worker's family and 4 per bourgeois family, saying France would then increase 300,000 to 400,000 per year at the expense of the more well-to-do (*Revue hebdomadaire*, May 8, 1909, pp. 146-47). G. Deherme approved Gide's recommendation (*Croître ou disparaître*, Paris, 1910, pp. 34 ff.). See also Bertillon and Leroy-Beaulieu, below, Chapter X.

[60] *Natalité*, pp. 66-72, 86-115; *Dépopulation*, chap. v.

[61] Dumont rejected the current ethical doctrines which measured value in terms of the individual or of the sum of individuals, saying these doctrines were subjective, metaphysical, incapable of quantitative formulation, and hence of no use in determining whether a people's customs and mores were good or bad. Moreover, in light of the prevailing ethical and moral doctrines, actions which were obviously beneficial to a people as a collectivity (e.g., procreation of illegitimates, or of large families) were condemned. Dumont defined man's end as the acquisition of "the greatest possible value," and that of the state as having "the greatest possible number of citizens, each having the most possible value," for cerebral matter was the highest form that matter could assume. What constituted individual value he did not say; it apparently included "fecund love and courage," "life, energy, activity." Demography offered an "objective criterion" for morality, "a means to judge the value of customs." If a population increases rapidly in number and density, and its members are active, youthful, optimistic, prosperous, given to love, that people's customs are good. If, on the contrary, non-growth, age, caution, fear, and mortality characterize a community's population, its customs and mores are bad. One can thus compare the efficacy of customs prevailing at different times in history as well as that of inherently different sets of customs. See *La morale basée sur la démographie* (Paris, 1901), pp. 65-78, 80-96, 122.

[62] *Dépopulation*, chap. xxvii, p. 511.

As we indicated in Chapter III, infertility was associated with ambition to rise in social rank already in the eighteenth century. Early nineteenth-century French writers saw in this ambition one of the main preventives of Malthusian misery. No writer prior to Dumont described the effect of social capillarity upon natality so well as L. Passy, who failed, however, to isolate the cause of social capillarity. Passy cited the statement of an official of Eure who noted in 1831 that "everywhere people work and aspire to comfort." Passy observed that the well-to-do Normans in general and the well-to-do families of Eure in particular procreated and reared only as many children as could be advanced to a social level above that of the parents, or be maintained at least at the parental level. The poor, on the contrary, having no prospects, had no inclination to limit family size.[64] Thus depopulation had but one cause: ambition—

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[63] *Ibid.*, pp. 126 ff., 441; *Natalité*, pp. 228-30; *La morale*, pp. 122, 180-81; *Rapport sur l'âge au mariage et son influence sur la natalité* (Paris, 1903), pp. 23-24. Although Dumont believed that maldistribution of wealth rather than population pressure was the source of misery, he implied that grain, fruit, and butter production needed to be increased in France. See *Natalité*, pp. 35-40; *Dépopulation*, pp. 517-18. In 1910 R. Hertz (*Socialisme et dépopulation*, Paris, 1910) stated that depopulation, which weakened France politically and decreased employment, could be checked only if maternity were adequately rewarded, particularly in the working class, and if opportunity, education, etc., were equalized, in short, only if socialist measures were adopted. In 1922 P. Lafitte *(La grande malaise des sociétés modernes et son unique remède)* advocated the limitation of the right to own landed property and the nationalization of landed property some designated time after the owner's death, saying that since this measure would assure land to each of a peasant's sons, the peasant would have more children. This somewhat Henry-Georgian proposal was presented by Lafitte as a cure for other social ills as well. The Italian, F. Nitti, who sought to combine the theories of Dumont and Spencer, found in greater equality the antidote for both over- and under-population. "Where wealth will be largely subdivided and where the social cause of inequality will be eliminated by an elevated form of co-operation, the birth rate will tend to become equal with the means of subsistence, and the regular variations of demographic evolution will not have, as in the past, an element of fear and terror." See Nitti, *Population and the Social System* (New York, 1894), p. 191.

> Ambition for well-being and, to say everything, will. . . . In the city the working class is in the presence of goods to which it is difficult to aspire; houses are of a price that most active perseverance could not attain; personal values escape their attention and desire. Lacking an immediate visible end that they would be able to pursue by saving, they live from day to day, thinking not of the morrow, giving to all things the attention of the moment. On the contrary, run through the country and see if the day laborer, the cultivator, places in the service of his pleasures a thoughtless ardor. The habit of calculating directs his spirit as passion for property dominates his heart. The soil under his eyes is infinitely divided and offers itself to his ardor. Each sale awakens his desires and provokes his efforts; he works, amasses, deprives himself, and when comes the moment of compromising the dream of his life by the burdens of a large family he reflects and stops himself.[65]

Dumont's theory was accepted in part by E. Pierson,[66] by exponents of the civilization theory (e.g., Leroy-Beaulieu, Gonnard, Bertillon), and by Auburtin, De Felice, Deherme, and others. Gonnard, stressing the psychological effect of the contradiction between political equality and economic inequality, wrote:

> Our society is a ladder with multiplied rungs . . . and no obstacle imposes a priori a limit to the ascension of each. Each lightens as much as possible the total burden of the family in order to be able to elevate himself higher.[67]

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[64] *J.d.e.*, 2d ser., XXXVI (1862), 425-26. The population of Eure, stationary between 1830 and 1846, declined after 1846.

[65] *Ibid.*, pp. 426-27. For a similar view see H. Passy, *J.d.e.*, 3d ser., V (1867), 313-15; *Annales*, X (1873-74), 41 ff. E. Labat tried to show that in Gascony in the early nineteenth century only the grasping bourgeoisie limited family size; that subsequently these grasping inclinations metamorphosed into a sheer desire for pleasure which became diffused throughout the population (*R.d.d.m.*, July 1, 1911, pp. 62-96). Love of sexual and other pleasures allegedly depressed natality in both eighteenth- and nineteenth-century France, according to R. von Ungern-Sternberg (*op. cit.*, pp. 162-64).

[66] *La dépopulation de la France* (Paris, 1913), p. 126.

[67] *La dépopulation*, p. 130; also *R.d.e.p.*, XVII (1903), 97-132.

J. Jung[68] and H. Clément[69] pointed to the great demand for governmental positions (positions which while relatively unremunerative and stifling of ambition, required one to maintain a relatively high scale of living) as a result of, and an aggravator of, social capillarity. C. Bouglé, in his study of the caste system, showed that social capillarity could not flourish under such a regime.[70] G. Mauco enumerates as causes of denatality the spirit of calculation, the ambition to rise, social capillarity, and the rising subjective standard of living, all concomitants of democracy and all of which have become increasingly important ever since the French Revolution brought political and moral and intellectual emancipation.[71] A. Landry says that modern man has steadily rationalized the process of living; that today he is interested in elevating his level of existence, whereas, prior to the nineteenth century, he was usually interested merely in preserving a given level of existence.[72]

A number of French social scientists who admitted that aspiration to rise depressed natality refused to attribute the decline solely to this factor, or to accept Dumont's explanation of the origin of social capillarity. The decline in natality, they believed, was associated with the rise of a great many factors and conditions which were lumped together and denominated "civilization."[73] Civilization, as defined by Leroy-Beaulieu, chief exponent of the theory, included the "development of cities and . . . of the middle class, the quasi-universal propagation of comfort . . . [and] instruction, the extension of leisure, the soaring of individual and family ambition, the prospect open to all of elevating themselves in the social scale," fear of decline in status, parental desire to elevate the child's status above that of the parents, and a kind of neopaganism (egoism, extreme interest in pleasure, sensualism in artistic expression).[74] Within a milieu permeated by "civilization," Leroy-Beaulieu believed, a decline in natality is inevitable, and increases in well-being, in place of fostering population growth, as they would under primitive conditions, merely accelerate the fall of natality.[75]

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[68] *Op. cit.*, pp. 236-38.

[69] *La dépopulation en France* (Paris, 1910), chap. vii, pp. 109-12; see also Rossignol, *op. cit.*, p. 116.

[70] *Essais sur le régime des castes* (Paris, 1908), pp. 212, 227.

[71] *Op. cit.*, pp. 20-26. He suggests that these bourgeois traits have been more characteristic of France than of other lands because a larger proportion of the French population has consisted of proprietors (p. 25, note).

[72] *La révolution démographique*, pp. 28-43, 184-92. In 1921 Dr. Marechal stated that since professional people could afford to raise but few children to their own status, state compensation of childbearing would be necessary to raise the birth rate in professional classes (*New York Times*, March 12, 1921).

[73] M. Bertillon père was the first to develop the "civilization" theory, having anticipated it in 1855 and formulated it in 1874 in his article, "Natalité," in *Dictionnaire encyclopédique des sciences médicales.* See J. Bertillon, *Dépopulation*, pp. 32, 128-29. Dumont's title, *Civilisation et dépopulation*, suggested the influence of "civilization."

Natality had declined first in France, Leroy-Beaulieu stated, because "civilization" had flourished in France earlier than in other countries. In France democracy and well-being had first become widely diffused, ancient traditions had first been cast off, the middle class had long been relatively more numerous than in other lands, all persons had long had access to all situations, and the sentiment of equality had first showed itself.[76] With this view J. Bertillon agreed, saying that the decline in natality had been initiated by the French Revolution, which had enfeebled religious belief and piety, spread the democratic spirit, and emphasized the personal rights of the individual. As a consequence, man had become a calculating, foreseeing, circumspect animal, prone to limit fertility whenever such limitation seemed to benefit him as an individual.[77]

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[74] Leroy-Beaulieu, *La question*, pp. 184, 220, 257-73, 403-05, 411-12; *R.d.d.m.* (Oct. 15, 1897), pp. 851-89. Many writers state or imply that French artistic expression is unfavorable to natality. See statements of Gide and others in Bertillon, pp. 203-09; Rossignol, *op. cit.*, p. 113; W. L. George, *France in the Twentieth Century;* H. Clément's estimates (*op. cit.*, p. 284) of the volume of French pornographic literature. Victor Margueritte in 1927 attacked the enemies of birth control in his novel *Ton corps est à toi.* Brieux attacked involuntary childbearing in *Maternité;* advocated birth control (*Matin*, Oct. 11, 1909, cited by Lascaux, *op. cit.*, p. 137); defended the right of unmarried women to bear children (see *L'enfant*, 1922), given the post-war disproportion between the sexes. See also Scheifley, *Brieux*. . . . Zola's novel *Fecondité* was directed against depopulation.

[75] *La question*, p. 233; see the similar opinion of G. Tarde, *Penal Philosophy* (Boston, 1912), pp. 309-10.

[76] *La question*, p. 186.

[77] *Dépopulation*, pp. 124-26. Elsewhere (*A.s.m.p.*, CLXXXI, 1914, 188-210) Bertillon shows that, following strikes in several communities whose

Natality remained lower in France than in other lands because French civilization remained more advanced. As civilization spread, however, natality would fall, as was apparent in the fact that the decline in natality had been most pronounced in the better-educated classes and in the more democratic lands and classes. Eventually foreign natality would approach the French.[78]

Several sociological writers subscribed in large part to the civilization theory. G. Rageot attributed to advancing civilization the moral and economic maladaptation of the family to the existing social and juridical regime and to the needs of the individual. He believed, however, that the resultant downward movement of natality would be reversed as the family became readapted and spiritual factors became more dominant.[79] H. Secrétan, who followed Spencer in part,[80] named as the checks to fertility economic and political centralization, urbanization, and the tendency of man to become pessimistic in proportion as the progress of civilization made him reflective.[81] Natural increase and population growth, therefore, move in cycles. Civilization may give rise to depopulation and its concomitants, cultural decline, insecurity, strife. These conditions

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population was already somewhat familiar with contraceptive practices, the birth rate fell very rapidly, presumably because the strike effected a change in the workers' attitudes and made them intensely self-regarding. On the custom- and tradition-destroying effects of revolutions and their effects upon natality see P. Sorokin, *The Sociology of Revolution* (New York, 1925); G. Rageot, *La natalité* (Paris, 1918); E. A. Ross, *Social Control* (New York, 1915).

[78] Bertillon, *op. cit.*, pp. 128-37; Levasseur, III, 494-96. Bertillon differed from Leroy-Beaulieu in attributing the decline not to "civilization" per se, but to certain of the factors the latter included under "civilization." Leroy-Beaulieu observed in 1891 that the German birth rate had not yet fallen because religious sentiment, remnants of feudalism, and old-time customs and manners still prevailed, despite the spread of education, socialism, etc. (*J.R.S.S.*, LIV, 1891, 378). Vicomte R. de Beaucaire stated that in German rural districts the birth rate was higher than in French rural districts because in the former regions moral and religious beliefs conduced to large families, French foresight was lacking, and the standard of living was low (*J.R.S.S.*, XLIX, 1886, 456 ff.).

[79] *La natalité*, pp. 96, 101-02, 152-53, 162-63.

[80] *La population et les mœurs* (Paris, 1915), pp. 325, 329.

[81] *Ibid.*, pp. 319, 338-39, 352, 381.

in turn dissipate the obstacles to natality and enable it again to increase.[82]

> Civilization and number have as natural consequences the gradual softening of customs, the increase of material and intellectual needs, the exaltation of the instinct of individual conservation. They give to each security and, to those who enjoy fortune, an extreme independence in the choice of their activity and their mode of existence within the limits of the prevailing law.
>
> But civilization encounters a grave danger, which it must work to avoid, that is the impoverishment of the race, the enfeebling of energies, which are no more stimulated by necessity, and the progressive diminution of the natality, which places all the work of generations in peril.[83]

A. Fouillée, in part a follower of Le Play and Dumont, attributed the decline in natality to the sum total of factors which influenced the situation of the family. Among the indirect sources of the desire to control natality—sources which are aggravated by urbanization—he enumerated: individuation, interest in personal and familial achievement, disinterest in duty to the collectivity, decline of otherworldly views, conflict between the aristocratic and democratic aspects of the social system, and economic change and instability (caused by rising price levels, and alterations in the methods of production and in the distribution of income).[84]

> The ascensional tendency, which characterizes humanity and which is its great psychological force, manifests itself in [its] constant aspiration to free itself of manual labor. This aspiration has as its end, either leisure and enjoyment, or a superior type of labor, of an intellectual, artistic, political order, which is itself a source of supe-

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[82] *Ibid.*, pp. 352-81. This conclusion is based on ancient Rome's experience.

[83] *Ibid.*, p. 381.

[84] *Psychologie*, pp. 292-353; *La France au point de vue morale* (Paris, 1900), pp. 395-402. Although Fouillée believed the decline in fertility to be in part the result of a decline in fecundity, he cited variations in the relative number of masculine births as proof of voluntary control. Male children, he said, are preferred. Therefore many will limit family size when a male child has been born. Therefore the ratio of male to female births will be higher in departments where voluntary control is practiced, as is indicated by the fact that the ratio of male to female births varies by department from 104:100 to 107:100. See *Psychologie*, pp. 295-97.

rior satisfaction. The more a people is intellectual and intellectualised by its civilisation, the more the ascensional movement accelerates itself. That is what has taken place in France. Besides, democracy suppresses all checks which could arrest the ascension.[85]

Fouillée believed that custom, opinion, morality, and natality are susceptible to some control by law, particularly by measures designed to effect a just distribution of family burdens. For in a complex society, all aspects of culture are organismically interrelated, exercising reciprocal influence upon one another.[86]

A number of economists subscribed in part to the "civilization" theory.[87] C. Turgeon, who accepted much of Leroy-Beaulieu's and all of Parodi's[88] theory, believed that a people grew in number only to decline at a later date. Demographic growth gave birth to civilization, which brought in its train foresight, egoism, self-interest, feminism, ambition, love of pleasure. Denatality and demographic and cultural decline normally followed and continued until arrested by the influx of a young conquering people, by regression to foresightless barbarism, or by the establishment of iron discipline under despotism. Turgeon apparently believed that the decline of French natality could be checked only through the restoration of morality, religion, patriotism, and respect for duty.[89]

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[85] *Psychologie,* p. 301. Given Tarde's instinct of imitation, the desire to ascend, if manifested by parts of the population, would be imitated by others (*ibid.*, p. 301).

[86] *Ibid.*, p. 353.

[87] E.g., Levasseur, Cauwès, Colson. Gide rejected it. Gonnard concluded that the "law of population," although founded upon physiology, psychology, economics, and sociology, and variable with the social milieu, today depends primarily upon the factor called "civilization." See Gonnard, *Histoire des doctrines de la population* (Paris, 1923), p. 342.

[88] Parodi reasoned that natality would decline only if four conditions were present: (1) the idea of limiting family size; (2) methods of limiting family size; (3) reasons for limiting family size; (4) few or no reasons for not limiting family size. The idea of limitation existed only among those who reflected upon the consequences of their acts, namely, the civilized peoples, originating among the bourgeoisie and percolating downward to the working classes. Means other than moral restraint were essential, for but few persons were capable of moral restraint. Motives existed in the form of personal interest (e.g., loss of job by expectant mother, fear of subdividing property under French inheritance law); ambition to rise economically or socially, an ambition that required the individual to accumulate capital; and the desire for pleasure, perhaps the most powerful of all motives. Western civilization lacked such counter motives as operated in China and other countries (e.g., religious duty and belief, desire to transmit family name, respect for family). It followed, Parodi said, that the decline in natality was due to corrupt customs, lack of moral discipline, enfeeblement of religious beliefs, egoism, and lack of familial, social and patriotic ideals; and that the decline would become more pronounced as man became informed relative to the laws of reproduction and as socialist, anarchist, and other revolutionary ideas spread. See *Revue de métaphysique et de morale*, May, 1897.

A number of relationships between natality and social and economic factors, some of which were pointed out in Chapter IV, have been observed by French writers of population. We have reduced these observations to eleven propositions, some of which have been incorporated into the volitional theories already described. These propositions presuppose volitional control to be responsible for the decline of natality—a presupposition accepted by most French demographers. The eleven propositions follow:[90]

1. The level of natality is a function of foresight, for departmental natality is high or low in proportion as the relative number of persons with insurance or savings accounts is high or low.[91]

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[89] *R.d.e.p.*, XXVII (1913), 435-49, 555-76; *Le féminisme français* (Paris, 1907), II, chap. v, pp. 120, 422-31.

[90] That the idea of family limitation is and has long been imbedded in French mores and folkways is indicated by French proverbs frowning upon more than two children (see Bertillon, *op. cit.*, pp. 107-09; Marshall, *op. cit.*, p. 34), and by the fact that exponents of large families have been ridiculed even in the Chamber of Deputies (Mauco, *Les étrangers en France*, p. 21, note) and in the trenches (Auburtin, *Natalité*, p. 93).

[91] See Bertillon, *op. cit.*, pp. 152-53, for data compiled by M. Tallqvist; also Auburtin, *La natalité*, 1921, p. 98; R. de Felice, *Naissances en France*, especially pp. 180, 224. An English writer suggested that the French, having been compelled to acquire habits of thrift during the hard times of 1700-1815, had subsequently converted these habits into desires for comfort and security (*J.R.S.S.*, XLV, 1883, 125-26). Leroy-Beaulieu concluded (e.g., *La question*, pp. 261-62; *Traité théorique et pratique d'économie politique*, Paris, 1900, II, 132, 154-57; IV, 617) that, given a fall in the interest rate, a certain originally accumulated capital fund would yield increasingly smaller amounts of income to a given generation, or to succeeding generations, of a family. Since these declining amounts of income would prove increasingly inadequate to support a family at a given level of living, the members of the family would be compelled to rely in an increasing degree upon income derived from personal activity. This change in the manner of securing a living would be accompanied by a decrease in the tendency of Frenchmen to accumulate capital sums for the mere purpose of enabling themselves and their descendants to live off the incomes yielded by such capital sums. Frenchmen would become more reliant upon personal activity and less

2. Natality, in general,[92] correlates inversely with the degree of wealth (as measured by the value of farms, by the value of estates left at death, or by indexes of income) possessed by different categories of the population.[93]
3. The decline in natality correlates with the increasing nonremunerativeness of children, and is attributable to the fact that children are no longer desired as formerly because they have become nonremunerative, incapable of adding appreciably to the family income until the age of (say) 15.[94]
4. The rise of feminism, as expressed in terms of woman's entry into industry and in her demand for self-expression and various rights, has constituted an increasingly effective check to nuptiality and natality.[95]

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inclined to curtail family size in order to save. Accordingly, since Leroy-Beaulieu anticipated a decline in the interest rate, he expected foresight and the inclination to save to become less important checks to family size. Other writers (e.g., Gide), particularly those who wrote after 1900, denied that the interest rate would fall, or (e.g., Turgeon) that the level of the interest rate had much effect upon natality. Yet others indicated that natality had fallen between 1872 and 1895 despite the fall in the interest rate, or suggested that if the interest rate fell the tendency to save would merely be aggravated. The probability of a conduct-determining decline in the level of interest rates is very small (*Southern Economic Journal*, III, 1936, 7-28).

[92] As shown in Chapter IV, there are some exceptions to this statement. On the basis of a recent study, L. Naudeau concluded that natality was greatest among certain groups of "*grands bourgeois catholiques*," among those adhering to ancient customs and outlooks, and among those with faith in the future (e.g., workers stimulated to natality by family allowances). See *La France se regarde* (Paris, 1931), pp. 445-47.

[93] See Bertillon, *op. cit.*, pp. 103-14, for summary of his and other findings; also data in Chapter IV, above.

[94] Leroy-Beaulieu, *La question*, pp. 257 ff.; R. de Felice, *op. cit.*, p. 184; G. de Molinari, *J.R.S.S.*, L (1887), 185-86. Child labor was not effectively prevented in France until 1874. For treatment of child labor legislation in France see *R.d.e.p.*, VI (1892), 1251; *J.d.e.*, 5th ser., XLII (1900), 82; *Bulletin of the United States Bureau of Labor*, XXI (1910), 143-231; *International Yearbook of Child Care and Protection* (London). This nonremunerativeness is not so much the product of child-welfare legislation as of changes in technology and in the accepted conception of the amount of consideration, education, etc., to be accorded to the child.

[95] See L. G. Numile, *J.d.e.*, 6th ser., XCVIII (1930), 314-20; also Turgeon, *Le féminisme*. Leroy-Beaulieu believed that natality was depressed by the increasing tendency of women to seek independence through employment; by the milieu in which working women, especially those in professions, lived; and by laws which unduly interfered with the right of women to work before and after delivery (*La question*, pp. 270-73; *J.R.S.S.*, LIV, 1891, 384). By 1900 a somewhat larger proportion of women were gainfully employed in France than in most other European countries; this is still the case. See

5. The increasing educational requirements for children not only extend the period during which children are unproductive but also aggravate ambition, dissatisfaction with status, and disinclination to bear children.[96]
6. The urbanward drift of the population depresses natality, for urban stimuli enhance the subjective standard of living and familiarize the population with anti-natality practices.[97]
7. Increases in the cost of living,[98] traceable to indirect taxes, to the absolute heaviness of the tax burden, and to the effects

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Auburtin, *op. cit.*, p. 99; M. Thibert, *I.L.R.*, XXVII (1933), 448-49. F. Dauriac states that the decline in natality in recent years is not traceable to woman's entry into industry; that although relatively more women work outside the home in France than in most European lands, the proportion of women engaged outside the home has declined from 39 per cent of the total in 1906 to about 37.5 per cent in 1926 (*R.d.e.p.*, XLVII, 1933, 102-04). In 1896 A. Fouillée admitted the possible validity of M. Hericourt's theory (developed in *Revue scientifique*, July, 1896) that the decline in American natality was caused by the masculinization of American women, by their living and working and acting more and more like men; denied that the masculinization of women had advanced far enough in France to explain the lowness of natality. See *Psychologie*, pp. 292-93.

[96] As early as 1858 when one-third of the men and over one-half of the women who married could not sign their names (*J.d.e.*, 2d ser., XIII, 1857, 216) it was objected that primary instruction made rural youths dissatisfied and caused them to migrate elsewhere (*J.d.e.*, 2d ser., XVIII, 1858, 86-89). A number of writers indicated after 1850 that education depressed natality. See Leroy-Beaulieu, *La question*, pp. 226, 233-34; *J.R.S.S.*, LIV (1891), 377; de Felice, *op. cit.*, pp. 189-90, 244; J. Bertillon, *op. cit.*, p. 137. Leroy-Beaulieu favored a reduction of the school term and the adaptation of the elementary educational program to the rural and industrial needs of France, the inculcation of satisfaction with one's lot, and the relaxation of apprenticeship requirements (see *J.R.S.S.*, LIV, 1891, 383 ff., and other works).

[97] See Chapters II and IV; also L. L. Cohen (*J.R.S.S.*, XL, 1877, 60); G. Lagneau (*Bulletin*, 2d ser., I, 1872, 1044-45); J. Michel-Levy (*Grande revue*, May, 1934, 477-80); De Lavergne (*J.d.e.*, 2d ser., XXII, 1859, 267-68). A. Legoyt (*J.d.e.*, 2d ser., XIII, 1857, 203) said that securing subsistence was more difficult in Paris than elsewhere, thus accounting for the smaller number of births per marriage in Paris compared to the average elsewhere. As Veblen has remarked, conspicuous consumption, which "is probably the most effectual of the Malthusian prudential checks," is most pronounced in urban populations. See *Theory of the Leisure Class* (Vanguard ed.), pp. 87-89, 113.

[98] We have relatively little data on the actual cost of rearing and educating children. Judging from a budget cited by A. Fouillée (*Psychologie*, pp. 316-17) and covering the period 1872-97, it cost an average of at least 2,000 francs per year to rear a boy from birth and put him through a school comparable to that of Saint-Cyr; at least 1,500 francs per year to rear a girl and educate her to the age of 17. In 1915, according to Charles Richet, it cost the poorest families at least 200 francs per year for 15 years to "nourish, clothe, lodge, and raise" a child (*R.d.d.m.*, May 15, 1915, p. 429). In 1917,

of protectionism and monopolies, check nuptiality and natality.[99]

8. The rise in the subjective standard of living, that is, in the desire for various goods and services, whether or not such desire may be satisfied at once, induces family limitation.[100]
9. Legal and economic factors check marriage in France (e.g., cost of doweries, particularly in the upper classes; lack of individual freedom in marital matters; expenses attending marriage; etc.).[101]

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according to Richet, the minimal cost per year of a child was 400 francs, or one-sixth of the annual modal wage (*Bulletin*, 3d ser., LXVII, 1917, 634).

[99] E.g., de Molinari, *J.R.S.S.*, L (1887), 185-88; Yves-Guyot, *J.d.e.*, 6th ser., LXXV (1923), 106. Leroy-Beaulieu (*La question*, pp. 430-32), however, denied that the tax burden per se was an important check to natality, saying that taxes in France were less heavy than formerly. About 1895 taxes absorbed 14 per cent of the French income; less than 14 per cent in most other European countries. See C. C. Zimmerman, *Consumption and Standards of Living*, p. 25. In 1884 a Paris household of nine persons paid in taxes nearly one-fourth of an income of 14,118 francs (*J.R.S.S.*, LVIII, 1895, 615). Prior to the World War 75 to 80 per cent of French revenue was raised by "indirect" taxes. Since 1913 the proportion of revenue raised by taxes striking the rich has been greatly increased. Between 20 and 30 per cent of the national income goes to taxes. See R. M. Haig, *The Public Finances of Post-War France* (New York, 1929), pp. 5, 401, 403.

[100] Although many of the writers cited have stressed this factor, they have not analyzed very effectively the social processes which shape the subjective and objective standards of living in France. M. Halbwachs states that tastes for new types of goods and services and for greater quantities of theretofore inadequately supplied goods and services evolve and are introduced into the worker's framework of wants during periods of rising real wages; that this framework is consolidated during periods of wage stability; that although no particular item in a worker's budget is immune to contraction, the ensemble of wants or items, once acquired, presents a united front to all forces designing to reduce this ensemble. (See *L'évolution des besoins*, Paris, 1933, pp. 128-51.) The most satisfactory treatment of the processes shaping the standard of living is that of C. C. Zimmerman *(op. cit.)*. Halbwachs does not discuss the relation of the standard of living to the birth rate, nor the extent to which tastes form configurations, the acquisition of any part of which makes the individual feel imperative want of the other parts of a given configuration.

[101] These checks were mentioned by Moheau (II, 77-80), by B. de Chateauneuf as early as 1824, and by many subsequent writers. See G. Lagneau (*A.s.m.p.*, CXXIV, 1885, 684, 687-88), who noted also that internal migration checked marriage by disturbing the sex ratio. J. Rochard listed among the causes of low natality the fact that sons aged under 25 could not marry without parental consent; the tolerance for irregular unions; and the expenses occasioned by the formalities attending marriage (*Bulletin*, 2d ser., XIV, 1885, 116). Both F. Marshall (*op. cit.*, pp. 17-18) and C. Letourneau (*The Evolution of Marriage*, 1911, pp. 352-54) charged that marriage in France was completely dominated by pecuniary calculation. A. Siegfried mentions

10. The enforced and lengthy period of military training, required of all[102] fit young Frenchmen, not only impaired the health[103] of many young conscripts and made it difficult for

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"the strong family instincts" in France as the cause of low natality (*Eugenics Review*, XVIII, 1926, 219). See also Mme. J. Adam, *North American Review*, CLII (1891), 37-46; De Felice, *op. cit.*, pp. 151-53; J. Bertillon, pp. 185-91. In France marriage is rather an alliance of families than an association of individuals, and parental domination over children has long been imbedded in law and custom. See H. W. Church, *American Journal of Sociology*, XXXIV (1928-29), 465-67; also Westermarck, *History of Human Marriage* (London, 1921), II, 340-42.

[102] The laws of 1832 and 1855 permitted conscripts to hire substitutes. Following the Prussian defeat of Austria in 1866 and French experience in Italy and Mexico, a real universal military service, similar to the Prussian, was proposed and the government adopted a system requiring five years' service in the active army and four in the reserve, a system not effectively introduced prior to the Franco-Prussian War. Following France's defeat a complete military reorganization was effected and five years' active service was stipulated under the law of 1872, liberal exemptions being provided, however. Under the laws of 1882, 1889, and 1892 active service was reduced to three years and exemptions were reduced. In 1905 the active term was reduced to two years, as in Germany, with only the physically disabled exempted. In 1913 political disturbances and uncertainty in Europe led France to adopt the three-year term of service (M. Paléologue, *R.d.d.m.*, May 1, 1936, pp. 67-94; May 15, 1935, pp. 307-44). In 1923 and 1928 respectively the term was cut to one and one-half and one years, and liberal exemptions were provided. Moreover, military requirements were reduced for members of families of specified size, in the expectation that such reductions would promote natality. The ordinary shortage of conscripts (it was stated in 1927 that not enough divisions were in effective service to meet minimal campaign needs, *R.p. et p.*, CXXXII, 1927, 313-16) and the present aggravated shortage (caused by the low birth rate of the years 1915-19 when births fell 40 per cent below the 1910-14 level), coupled with the rise of Hitlerism and the allegation of army officers that one year of training is inadequate, led to agitation for an extension of the term of service and later to the issuance of a decree in March, 1935, extending by six and twelve months the period of service required of contingents of conscripts called between 1935 and 1940. See Marshall Petain, *R.d.d.m.* (March 1, 1935), pp. i-xx; A. Millerand, *ibid.* (April 1, 1935), p. 534; A. Crasset, *R.p. et p.* (April, 1935), pp. 21-22; series of articles beginning in *La revue hebdomadaire* (April 13, 1935); P. J. Philip, *New York Times* (March 3, 1935); A. Werth, *Which Way France* (New York, 1937), pp. 129-32, 223-24. During the debate on a bill to extend the service to two years and to lower the age of conscription to 20 years, it was indicated that this bill would provide France with an army of only 400,000 (excluding colonial troops) as against 800,000 in Germany. Opposition came not only from the left but also from the large family deputies who sought exemptions for members of large families. See P. J. Philip, *New York Times*, Dec. 27, 1935. The conscript supply in 1935-39 is 40 per cent below the 1931-34 level; in 1942 it will be 27 per cent below the Italian level and 40 per cent below the German level. See F. Burgdörfer, *Notizario Demografico*, IX (1936), 214.

[103] De Molinari held, on the basis of French morbidity statistics, that many young conscripts, barely fit to enter the service and unused to army life hard-

them to become readjusted to domestic life,[104] it was said, but made the young men dissatisfied with rural life and simple tastes, destroyed their virtue and sobriety and willingness to work, retarded marriage, and enfeebled the race by causing a relatively larger amount of reproduction to be carried out by those unfit for military service.[105]

11. The decline in natality is said to correlate[106] with the decline in the intensity and the extensity of religious faith[107]—a faith

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ships, acquired tuberculosis, typhoid, dysentery, etc., and became physically degenerate and subject to illness. See *J.R.S.S.*, L (1887), 183-89; also De Nadaillac, *Le péril national*, pp. 45-46.

[104] Levasseur, III (1892), 115, 165. Levasseur denied, as did others, that French army life explained the relative lowness of French natality, in view of the conscription requirements of Germany and other countries with high birth rates.

[105] See J. Michel-Levy, *op. cit.;* Broca, *Bulletin*, 1st ser., XXXII (1866-67), 862; L. LeFort, *R.d.d.m.* (May 15, 1867), pp. 477-81; (March 15, 1870), p. 366; *De l'influence du recrutement de l'armée sur le mouvement de la population en France* (1868); E. Ollivier, *L'empire liberal* (Paris, 1907), XI, 486 ff.; H. L. Roth, *J.R.S.S.*, XLVIII (1885), 83; V. Turquan, *J.R.S.S.*, LIV (1891), 695; J. Bertillon, *op. cit.*, pp. 279-84. The earlier discussions of the relation of conscription to the birth rate were in part products not of the population problem as such but of the persistent opposition in France to increases in the burden of military service and must be appraised in light of their anti-conscription bias.

[106] Clément held that the laical schools inculcated egoism and that fertility was greatest in the religious departments (*op. cit.*, p. 79 and chap. v; see also V. Giraud, *R.d.d.m.*, XX, 1924, 384, and M. G. Callon, *L'effondrement de la natalité française*, 1918, p. 89). Leroy-Beaulieu noted a higher natality in religious departments and among the upper Catholic bourgeoisie (*La question*, pp. 395, 399). Naudeau concludes, as does R. Martial, whose work (*Le parlement et l'opinion*) he cites, that whether natality is high or low depends upon whether men have faith, religious or otherwise, in the future (*La France se regarde*, pp. 445-47). J. Eyserric (*Politique laïque et dépopulation*, Paris, 1931, especially pp. 183, 324), follower of Charles Maurras and Charles Benoist, associates the decline in natality with the rise of individualism and parliamentarianism, offers as the solution the restoration of Catholicism and the monarchy and the enactment of Le Play's proposals. M. S. Gillet, a Dominican father, sees in Catholic education and Catholicism the only corrective for the familial disorganization and individualism to whose growth he ascribes the decline in natality. (See *L'église et la famille*, Paris, 1917, Parts II-III.) Bertillon noted a higher natality in religious departments, but characterized restoration of religion as an illusory remedy (*op. cit.*, pp. 126-28). Bureau, a Catholic sociologist, considered the revival of religion as but one of the factors necessary to restore moral discipline (*op. cit.*, pp. 451-538) and raise natality. Levasseur (III, 169-71) found no correlation between the degree of religiousness of areas and their natality. Gonnard, too, cites striking exceptions (*La dépopulation*, p. 77).

[107] The data on French religious persuasion are not recent, for the religious census, taken 1851 to 1876, was then abandoned because of the incorrectness of the replies and because of objections to having to disclose religious per-

that makes man otherworldly, unselfish, satisfied to sacrifice and to put up with a low material level of life,[108] a faith which, when Catholic, through the confessional, the priest, and literature and propaganda, may bring pro-natality and anti-birth control pressure.[109] Possibly, too, religion inspires confidence in the future, instinctive or reasoned, lack of which, says E. Julia,[110] is the cause of lowness of natality.

The various theories and explanations summarized in this chapter have contributed to the shaping of the French pro-natality policies, proposed and/or actual, discussed in Chapter X. We shall in part appraise these various theories in Chapter XI.

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suasion (*J.d.e.*, 4th ser., IV, 1878, 324-35). These censuses revealed a population allegedly about 97.5 per cent Catholic, 2 per cent Protestant, and less than 0.5 per cent Jewish or otherwise, the Protestants remaining grouped in the Huguenot sections (*J.d.e.*, 3d ser., XVIII, 1870, 50; Levasseur, I, 339-40). These census figures revealed nothing relative to the true state of Catholicism, for the relaxation of religious faith, noted by Moheau in 1778 and revealed in the steady weakening of the church as a political organ in the nineteenth century (A. Galton, *The Church and State in France*, 1907, pp. 61 ff., 247-59) lends evidence to the supposition that in the closing quarter of the nineteenth century only about 30 per cent of the population was properly Catholic (cf. J. C. Bracq, *France under the Republic*, 1910, chap. ix) and to Gonnard's statement (*La dépopulation*, p. 77) that "France is in large part irreligious." The general impression is that French Catholicism, considered as a conduct-determining factor, grew steadily weaker in the nineteenth century. C. J. H. Hayes, who stresses the importance of Catholic customs in French culture, believes that the "devout faithful" form "a considerably smaller number" than the 70 per cent estimated to be Catholic (*France: A Nation of Patriots*, New York, 1930, p. 96).

[108] B. Kidd, Boutreaux, and Bureau mention these self-submerging effects of religion (Bureau, *op. cit.*, p. 497). Bertillon cites a contrary opinion (*op. cit.*, p. 128). See also R. de Felice (*op. cit.*), who reviews French opinion on Catholicism and natality.

[109] The Church ranks *congressus interruptus* next to murder and violently condemns contraception and abortion; in the eighteenth century husbands guilty of onanism were condemned. Yet Bureau cites evidence to show that for more than fifty years a large proportion of French priests have been lax in the confessional in regard to conjugal and sex life (*op. cit.*, pp. 511-16; also Leroy-Beaulieu, *op. cit.*, p. 398). R. de Felice, who agreed with Gide that Protestantism condemned lack of chastity more and birth control less than did Catholicism, concluded that Catholicism was effective in raising fertility only in proportion as the priests counseled fertility (De Felice, *op. cit.*, pp. 259-61). In the present century pastoral (e.g., Mgr. J. A. Chollet, *Le fléau de la dépopulation*, 1913) and similar letters have condemned as sinful and criminal birth-restricting practices (Auburtin, *op. cit.*, pp. 87-88) and both Protestants and Catholics have extolled natality at the natality congresses (Bureau, *op. cit.*, p. 527; *R.S.*, IX, 1919, 260).

[110] *R.p. et p.*, CXLIX (1931), 385-86. E. Julia attributes this lack of confidence in part to France's political and military insecurity (*ibid.*, p. 384).

CHAPTER VIII

COLONIAL THEORY, COLONIZATION, AND EMIGRATION

THE DEMOGRAPHIC trends described in the preceding chapters have exercised considerable influence upon French social and political theory and upon French internal and external policies. Measures have been advocated and sometimes adopted to alter or to counterbalance these demographic trends. Measures, policies, and theories have been shaped in part by these trends. For the position, character, and behavior of France as a politico-economic organism relative to other European politico-economic organisms have been conditioned in a large degree directly and indirectly by her demographic situation. The principal directly discernible effects have manifested themselves in French colonial theory and policy, in the French attitudes toward emigration, in the great volume of immigration and the reaction thereto, and in the variety of policies specifically proposed or adopted to augment the rate of natural increase. These effects, etc., will be discussed in the remaining chapters of this study.

French policies other than those herein discussed—in a sense nearly every French policy and social theory—have been and are being influenced by the demographic situation of the country. A few examples will suffice to illustrate, inasmuch as discussion is impossible in a study so limited as this. French opposition to disarmament was based upon the premise that her low natality must be counterbalanced by military strength.[1] The extension of the term of military service was caused in large part by the long anticipated deficit of conscripts in 1935-39. The general military and foreign policy of France, in so far as the quest for security is concerned, is and has been influenced by her relative demographic condition. Undoubtedly, the French pre-war policy of extending credit to her allies, particularly to Russia, was greatly influenced by her relative lack of demographic power.[2]

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[1] See S. Lauzanne, *Current History*, XIX (1923-24), 411-15; also *New York Times*, July 14, 1921; L. Naudeau, *En écoutant parler les allemands* (Paris, 1925), chap. vi and p. 295. Naudeau predicted that German rearmament could not be prevented and advocated, apparently as a means of improving relations with a stronger Germany, the restoration of Germany's colonies.

Prior to the French Revolution the government was actively interested in the control of both emigration and colonial development. Both statesmen and writers who dealt with questions of population were opposed to emigration, at least in so far as the emigrants did not leave France to people her colonies; they favored both laws which would prevent emigration and the creation of conditions of employment sufficient to retain within France her own nationals and to attract immigrants from foreign nations. Not until the eighteenth-century writers extolled the principles of individual liberty do we find it suggested that a national has the right to migrate freely. Legal barriers, implemented by penalties, were placed in the way of those who wished to emigrate to non-French lands by the French government, particularly in the seventeenth and eighteenth centuries.

Despite these barriers, however, France at various times experienced relatively heavy emigration, both prior to the reigns of Louis XIV and XV, whose foreign policy shifted French attention from the New World to Europe,[3] and later when conditions in late seventeenth- and eighteenth-century France conduced to emigration. Concerning the volume of this emigration we have relatively little data. Bodin noted a heavy emigration to Spain in the sixteenth century. Protestants began to emigrate in the sixteenth century, upon the outbreak of the religious wars, and continued to migrate intermittently until the French Revolution. It has been estimated that as many as 300,000 left in the closing third of the seventeenth century, as a consequence of the Revocation of the Edict of Nantes and the events leading up thereto. In the eighteenth century, according to Moheau (who, like Goudar, believed France to be the European country whence went the greatest number of emigrants), about one person in two thousand left every year, total annual emigration approximating 10,000 to 13,000. This number includes an annual average of 2,500 who went to French colonies; the remainder consists of those who went to non-French lands, of military deserters, of recruits for foreign armies, and of those who died at sea or while emigrating.[4] Whether, with the removal of many of the barriers to emigration and the increase of tax and other burdens during and after the Napoleonic period, emigration increased is not determinable. We know only that there was fairly heavy emigration in and after the Napoleonic era, 200,000 to 300,000 leaving France in 1800-50.

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[2] "French political destiny was being worked out from day to day midst a world that included enemies, and regions that were potential prizes for stronger and more civilized powers; French foreign investment was one of the forces by which this destiny might be made safe, perhaps, a triumphant one." See H. Feis, *Europe: The World's Banker: 1870-1914* (New Haven, 1930), p. 157. France's capacity to lend was partly traceable to her low natality. On foreign policy see A. Vagts, *A History of Militarism* (New York, 1937), pp. 232-34, 408-12, 458.

[3] See R. Gonnard, *R.d.e.p.*, XXX (1916), 256-79.

Prior to the eighteenth century, French writers and statesmen were in favor of colonial development, the intensity of their favor varying in part with French aims in Europe.[5] With the rise of liberalism in the eighteenth century, however, many French writers criticized and opposed the French colonial system. For it rested upon negro slavery and monopoly, trading rights being confined to France. And slavery, or monopoly, or both were no more justifiable in the eyes of eighteenth-century French liberals than were domestic abuses under the *ancien régime*.[6] Others, such as Vergennes (1784), believed France had no need of colonies to be strong.[7] Those who favored laissez faire and supposed, as did the Physiocrats, that French agriculture was in need of capital, believed that capital would be more economically expended in French agriculture than in colonial ventures, and that the latter would succeed best under laissez faire. Still others, such as Montesquieu (1722), Goudar (1756), and Moheau, believed that the colonies tended to depeople the mother country, since the climate of the colonies, being unsuited to the French, cut down a large proportion of the colonists, and since many of the survivors remained celibate.[8] Despite the large volume of anticolonial opinion and the French lack of success in colonial ventures up to and immediately after the Revolution, French interest in colonies, particularly in Africa, was revived in the closing years of the eighteenth century.[9] Under Napoleon, however, French attention became confined to Europe and France lost her colonies, some of which were returned after the defeat of Napoleon.

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[4] G. Schelle cites an estimate of 10,000 emigrants a year in the eighteenth century. See *Vincent de Gournay* (Paris, 1897), p. 87. For the other facts mentioned above see Moheau, I, 243-47; Mathorez, I, 53-63.

[5] Sully is a notable exception; he looked with disfavor upon colonial ventures.

[6] Rousseau, De Mably, Montesquieu, Voltaire, Raynal, Poivre, Turgot, Diderot, Condorcet, and Dubuc were among those who rejected the French colonial system. See C. L. Lokke, *France and the Colonial Question* (New York, 1932), pp. 36-59, 74-75, 112-13; also the present writer's study of pre-1800 French population theory cited in Chapter V, note 3.

[7] *Ibid.*, p. 79.

Although, at the beginning of the nineteenth century, P. F. Page stressed the importance of colonies, French economic opinion was opposed to colonial development during the first half of this century. Page sought to show that the French were better colonizers than the English and knew better how to deal with native peoples; that France was more able than England to develop and people colonies. He suggested, however, that France's population could increase by several millions before colonies would be required to absorb the surplus; but he added that if emigrants went to the colonies they would rapidly multiply there to the advantage of the home country.[10] Peuchet, some years later, accepted Montesquieu's opinion that colonies tend to become independent units,[11] but did not treat the colonies in respect to the then demographic state of France. Some years later L. Reybaud, a critic of Malthus, expressed a view not unfavorable to colonies when he described emigration as a natural process designed to spread civilized peoples throughout the world and thus to check barbarism, develop the power of the mother country, and make available to European peoples an increasing variety of new products.[12]

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[8] Montesquieu, *Lettres persanes*, Letter 122; Goudar, I, 301-05, 329-32; Moheau, pp. 127-28. Although extremists, such as the Abbé De Pauw, believed the colonies utterly unsuited to development by European peoples, the French government after 1763 sought to people the tropical colonies and experienced heavy losses in lives and money. See Lokke, *op. cit.*, pp. 18-21. Montesquieu observed (Letter 122), as did others, that when colonial climes favored population growth, the colonies grew only to become independent states.

[9] See Lokke, *op. cit.*, Part II, chap. ii.

[10] *Traité d'économie politique et de commerce des colonies* (Paris, 1801-02), I, 257-58, also 267-85. Durand, a French official at this time, opposed colonization of Africa with white French settlers, on the ground that France had no population to spare. Voltaire had once made this point with respect to Louisiana. Bernardin de St. Pierre, however, though a critic of French colonial policy, had in 1789 described colonies as outlets for France's surplus population. See Lokke, *op. cit.*, pp. 41, 152, 177.

The liberal economists looked upon emigration as a mere temporary palliative for population pressure which, they said, would redevelop in spite of emigration unless men practiced moral restraint and limited family size. They maintained, in accordance with the Malthusian thesis, that emigration not only could not depeople the country of emigration, but could not even carry away enough people to relieve population pressure. They believed further that the country of emigration benefited most when the least desirable elements in the population emigrated.[13] While some looked upon emigration as a natural equilibrating process which served to re-establish parity among the wage levels of different countries and with which governments should not interfere, others believed that emigration carried from France the capital invested in the emigrants and that emigration would diminish if and in proportion as the productivity and income of French labor were increased.[14] Many liberal economists probably agreed with Juglar's statement that the failure of the French to migrate to Algeria was evidence of the well-being felt and enjoyed by the population of France.[15]

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[11] *État des colonies et du commerce dans les deux Indes* (Paris, 1821), II, 780.

[12] *J.d.e.*, 1st ser., I (1842), 191-96.

[13] These views, common to all the liberal economists, are well stated by J. Garnier, *Du principe de population* (Paris, 1857), pp. 40-41, 113, 143-501; *Annales*, I (1846-53), 389 ff.; G. du Puynode, *J.d.e.*, 2d ser., V (1855), 73-77; J. B. Say, *Cours complet d'économie politique* (Brussels, 1840), Part VI; P. Rossi, *Cours d'économie politique* (Brussels, 1840), I, 200-50, II, 206-38; C. Dunoyer, *De la liberté du travail* (Brussels, 1846) pp. 214-21; E. de Girardin, *L'abolition de la misère* (Paris, 1850), p. 36.

[14] E.g., see L. Wolowski and H. Say, *Annales*, I (1846-53), 387 ff.; *J.d.e.*, V (1885), 40; A. Legoyt, *J.d.e.*, 2d ser., XXXI (1861), 265.

[15] C. Juglar, *J.d.e.*, 1st ser., XXXVI (1853), 233. Juglar later attributed the failure of French colonial ventures in Africa to the greater frequency there of commercial crises. See *J.d.e.*, 3d ser., XV (1869), 122-36.

In general, the French economists either ignored the colonial question or, in consonance with the then generally accepted tenets of laissez faire, expressed disapproval of state support of colonial expansion. Rossi probably expressed the prevailing liberal view when he condemned colonial systems on the ground that they were, or tended to become, mercantilistic, monopolistic, and protectionistic.[16] Given freedom of trade and competition, private enterprise would exploit domestic, foreign, and colonial resources as rapidly and effectively as possible. But under state promotion of colonial development, it was highly probable that favoritism and mercantilistic practices would develop and the natural tendency of competing entrepreneurs to utilize resources most economically would be frustrated.[17] If the liberal economists accepted J. B. Say's view that human happiness could be promoted by colonization only in so far as the establishment of colonies did not involve war and did involve only the settling of areas that were unpopulated or peopled solely by savages,[18] they also probably accepted the views of Du Puynode. Du Puynode said that the colonies should be allowed as much political and economic liberty as possible; that the function of Europe was to Europeanize the colonies and render them fit to enter the family of nations; that, as Arthur Young and Poivre and Franklin had shown, certain of the French colonies cost France sums which, if expended upon French agriculture, would yield many times what they yielded in the colonies.[19]

In the second half of the nineteenth century colonial expansion continued to be opposed on economic and demographic grounds and later on the ground that colonial developments interfered with the realization of France's aims in Europe. Proposed interferences with emigration were also criticized. Levasseur stated that although France's colonial expansion had augmented her prestige, the cost had been great; that the proper future foreign policy for France to follow was one of peace and non-expansion;[20] that while France's natural increase was too low to permit emigration anywhere but to French colonies, emigration was a normal movement and would improve France's commercial relations with the countries to which French emigrants moved.[21] Similar opinions were expressed by various French politicians and leaders who contended that colonial expansion involved nonremunerative pecuniary and military expenditures by the state; that France had no surplus population wherewith to people colonies; that colonization weakened France, relative to Germany, by "taking men to fight Asiatics and Africans in distant colonial ventures";[22] that the expenditure of men and money on colonial schemes would militate against France's recovery of Alsace-Lorraine.[23]

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[16] *Cours*, II, 206-38.

[17] E.g., see G. de Molinari, "Colonies," in *Dictionnaire de l'économie politique* (Paris, 1864), I, 399-401. To F. Lacroix's proposal that the French government foster the colonization of Algeria (*J.d.e.*, 1st ser., XXIX, 1851, 150) J. Garnier replied that if security were established in Algeria, private initiative would promote colonization if it were economically feasible (*ibid.*, p. 150). See also *J.d.e.*, 2d ser., XIII (1857), 459-60; XIV (1857), 309-11; 3d ser., XV (1869), 122-36, for discussion of the merits of colonizing Algeria.

[18] See Say, *Cours*, Part VI, p. 400; also H. Oppenheimer, *Le liberalisme français au début du XIX^e siècle (Jean-Baptiste Say) et la colonisation* (Paris, 1930).

[19] Du Puynode, *De l'esclavage et des colonies* (Paris, 1847), pp. 187-93, 198-99.

Pro-colonial views began to appear in the early 1860's. Colonial expansion was defended on a number of grounds closely related to the population question. Colonies, it was said, would provide opportunities to the young Frenchmen and therefore encourage French parents to procreate more children to grasp these opportunities. Colonial populations, even though largely indigenous or of non-French derivation, would provide

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[20] III, 272-73, 300, 303.

[21] III, 397; also similar views of L. Bourgeois, *ibid.*, p. 396, note. Levasseur states (III, 316) that a geographical society had recommended that French emigrants be prevented from going abroad and be induced to repeople abandoned farm land.

[22] S. A. Roberts, *History of French Colonization Policy (1870-1925)* (London, 1929), I, 6, 8-13. See also C. Southworth, *The French Colonial Venture* (London, 1931), chaps. i-ii.

[23] W. L. Langer states that so long as French thought was concentrated upon the German menace and the lost colonies "it was regarded almost as treason to suggest the dissipation of French forces outside of Europe." See *European Alliances and Alignments, 1871-1890* (New York, 1931), pp. 285-86; see also E. M. Carroll's treatment of French colonial policy in *French Public Opinion and Foreign Affairs* (New York, 1931), chap. v.

France with military- and man-power in times of need and thus counterbalance the larger populations of France's potential enemies. Colonies would provide France with opportunities for expansion denied to her on the Continent and thus would restore and preserve her prestige as a world-power. Colonies, it was maintained (particularly by Jules Ferry, the statesman most responsible for French colonial expansion), required for their development not a surplus of French population but a surplus of French capital.[24] Colonies would provide markets for French goods, markets denied to France in a protectionist world. Colonies thus came to be viewed not as sources of relief from population pressure but as spheres of French influence, as markets for French goods and capital in a protectionist world; not "as entities or as potential entities" but as parts of the French political and economic organism, as elements of strength to the motherland and as sources of relief for her burdens.[25]

The writers chiefly responsible for the development of procolony theory in France were J. Duval, Prevost-Paradol, Le Play, L. Saint-Organ, Leroy-Beaulieu, and Ferry. Duval, editor of *L'économiste français*, criticized those who advocated peopling Algeria with Chinese and Negroes,[26] saying that emigration would not weaken France. Colonization of French colonies would increase the productivity of French labor, promote the growth of the French population, and facilitate its economic absorption.[27] Duval attributed the slow growth of the French to their failure to emigrate and to colonize, saying that French parents would be more inclined to procreate if their children had the opportunity, if necessary, to emigrate to French colonies. Colonies offered an escape from depopulation and from encompassment by the Germans and the Anglo-Saxons.[28] Prevost-Paradol's hope that colonial development would strengthen France and overcome her slow population growth and its consequences was founded upon theses similar to those of Duval.[29]

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[24] Roberts, *op. cit.*, p. 16. Leroy-Beaulieu also developed this thesis, saying that while colonies such as Australia required peopling, colonies for exploitation (e.g., Cochin-China) required no immigrant stream, and "mixed" colonies (e.g., Algeria) required only a moderate number of immigrants. See *De la colonisation chez les peuples modernes*, Preface to 2d ed. (Paris, 1882). For representative opinions on colonization at this time see *J.d.e.*, 4th ser., XXIV (1883), 100-06.

[25] Roberts, *op. cit.*, I, 18, 37; II, 640; see also *J.d.e.*, 5th ser., XLII (1900), 114-20.

[26] See *J.d.e.*, 2d ser., XVIII (1858), 380-404. French and Europeans could people Algeria, he said, and make it a powerful colony; introducing a servile population would prevent effective development of Algeria.

[27] *Annales*, V (1862-64), 137. J. Dupuit and M. Darbel criticized Duval's views and pointed to the risks and pains faced by emigrants. See *J.d.e.*, 2d ser., XXXVII (1863), 344-48; XXXVIII (1863), 156-57; also H. Baudrillart, *A.s.m.p.*, LXXIV (1865), 152-53.

Duval's views were criticized in part by M. Chevalier, who attributed France's failure to develop colonies to the slow growth of her population. He denied, however, that this failure was proof of French decadence, or a source of danger to France. "France does not decline; she has, in our day, a prestige which maintains her as much as ever in the rank of a nation of the first order."[30] Chevalier admitted, however, that a nation's position was weakened when her population failed to grow and spread, and pointed out that capacity for "intellectual colonisation," although a temporary offset to incapacity for demographic colonization, would weaken and die if unsupported by "material expansion."[31] Chevalier later stated that French parents might procreate more children if they foresaw a market for their services in countries to which they might emigrate.[32]

Le Play denied that the French lacked the capacities[33] necessary to develop colonies, attributed their failure to colonize to the natality-depressing effect of French inheritance laws, and asserted that colonies and colonial expansion were necessary to the preservation of those characteristics of societal organization which induce men to procreate. He stated that colonies, though tending to attract able persons who sought a happy future, would not depeople France of its youth nor attract all of France's poverty stricken. In general, the development of French colonies would promote in France as in other colony-owning nations the growth of industry, agriculture, and population.[34]

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[28] *J.d.e.*, 3d ser., XIII (1867), 315-19. See also *Les colonies et la politique de la France* (Paris, 1864); *Algerie et les colonies françaises* (Paris, 1877); *Les colonies et la politique coloniale de la France* (Paris, 1884).

[29] See Prevost-Paradol, *La France nouvelle* (Paris, 1868). His views are stated in chap. ii. In this same year (1868) A. Gaudin published *De la possibilité d'une vaste colonisation dans l'Océanie* (Paris).

[30] *A.s.m.p.*, LXXIV (1865), 147.

[31] *Ibid.*, pp. 139-40.

[32] *Annales*, X (1873-74), 47 ff.

[33] In the eighteenth century it had already been asserted that the French lacked "the talent and the spirit to form colonies." See Lokke, *op. cit.*, p. 22; Mathorez, I, 95. English writers in the nineteenth century mentioned as causes of the failure of the French to emigrate to colonies and elsewhere the absence of population pressure, the French love for the customs of the homeland, and the economic well-being of the French population (*J.R.S.S.*, XL, 1877, 560; XLV, 1883, 128; XLVII, 1884, 508-11; XLVIII, 1885, 69). Le Play named as alleged causes which he considered invalid the well-being of the French population and their lack of colonizing and administrative ability. M. Pauliat denied that the French lacked ability to colonize in his *La politique coloniale sous l'ancien régime* (Paris, 1886 or 1887). R.

Leroy-Beaulieu, whose theoretical defense of colonial expansion paralleled Ferry's practical efforts, was more instrumental in the formulation of a demographic pro-colonial theory than any other French writer.[35] He contended that France's only hope for the future lay in the development of an African empire, inasmuch as the smallness and the slow growth of the French population required France to follow a passive continental policy, particularly in respect to Germany and the recovery of Alsace-Lorraine. France could spare enough emigrants for colonial development, despite her low natality, by admitting into France and "Frenchifying" as many immigrants as were needed to counterbalance the efflux of French to the colonies.[36] He reasoned, further, that France's French colonials would increase more rapidly than the home population, that foreign

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Gonnard asserts that the Celtic peoples for centuries were great migrants and ceased to emigrate permanently and in numbers only about the seventeenth century, particularly under Louis XIV and XV, when French foreign policy was more concerned with Europe than with America (*R.d.e.p.*, XXX, 1916, 258-79). The migration to Spain and America gave way to "sedentaryism" (Gonnard, *Histoire des doctrines de la population*, Paris, 1923, pp. 50, 103, 113, 150, 206).

[34] *La réforme sociale en France* (Paris, 1866), I, 456-62.

[35] *Op. cit.*, 1st ed. (1874); 3d ed. (1886); last ed. (1908). See also *L'économiste français*, May 7, 1881; Sept. 20, 27, 1890. See also the somewhat similar argument of Lefevre Saint-Organ (*La question sociale et la crise*, Paris, 1886, p. 13), who said that since by 2000 A.D. England and Germany would number 145 millions as against France's 50 millions, France must seek strength in colonies.

[36] G. Charmes said that France could spare 15,000 to 20,000 emigrants per year (*R.d.d.m.*, Nov. 1, 1883, p. 53).

immigrants into the colonies could be Frenchified, and that emigration, by creating optimism in the French population, might result in an elevation of natality.[37]

The argument of Duval and Leroy-Beaulieu that emigration to colonies and to foreign countries would augment the French birth rate—in part a reply to those who said France's low birth rate greatly reduced her capacity to colonize[38]—was emphasized by a number of writers. A. Bertillon asserted that continuous emigration would elevate natality in France.[39] G. Lagneau, who advocated colonial development as a means of increasing natality, said that "a regular continuous, even considerable emigration, often, by augmenting subsistence and occupations, motivates a considerable natality and, as a consequence, a notable increase of population."[40] G. Charmes said that France would become as prolific as England and Germany if all French departments sent emigrants abroad regularly, thus establishing abroad places to which French parents could send the children they procreated. He advocated, therefore, that the law on conscription be revised to lighten the military burden of those who went to the colonies.[41]

Leroy-Beaulieu's views were echoed in the closing years of the last century by J. A. Ricaud, who held that colonial development was essential to the very existence of the French nationality and population;[42] by L. Vignon, who advocated the emigration of French emigrants and capital to French colonies;[43] by Paul Gaffarel, who sought to refute the arguments against colonies and saw in their development a means of promoting French population growth;[44] and by E. Poire, who expressed alarm at France's slow demographic growth and failure to send enough emigrants to her colonies.[45] Colonization, said Poire, would enable France to escape the decline and fate of classic Hellas.

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[37] *Op. cit.* (3d ed.), Prefaces, pp. 337, 608-14, 719 ff. He added, as did other writers, that the colonies would provide France with markets for French goods and capital and sources of raw materials. J. Chailley, in the article "Colonies" in *Nouveau dictionnaire d'économie politique* (Paris, 1900), states that colonies provide a market for products, a temporary relief for population pressure, an outlet for daring and enterprising persons, and a source of political power (I, 436-39).

[38] H. Passy (*A.s.m.p.*, LXXIV, 1865, 149) and Charles Richet (*R.d.d.m.*, July 1, 1883, pp. 223-24) were among those stressing the fact that France's low birth rate prevented migration to the colonies and to other countries.

[39] Article "Migration" in *Dictionnaire encyclopédique des sciences médicales*, VII (1873), 658.

[40] *A.s.m.p.*, CXX (1883), 193, 194-95. Lagneau cites F. Passy to this effect. See *ibid.*, CXXII (1884), 680. North European women, said Lagneau, could reproduce effectively in colonies no hotter than Algeria (*ibid.*, pp. 693-95).

[41] *R.d.d.m.* (Nov. 1, 1883), pp. 72-84. At the request of the French Chamber of Commerce in 1884, a bill was introduced but not passed providing a reduction of the conscription requirement of young men who, in time of peace, went to the colonies or to foreign countries for five or ten years for the purpose of establishing commercial relations for France. See Lagneau, *A.s.m.p.*, CXXII (1884), 552.

> We have need of living colonies. They are necessary to us in view of the superabundance of our products and our capital; they are necessary to us in order to pull our population out of the somnolence in which it would be disposed to languish and in order to stimulate natality in our country. A people which colonises is a people which perpetuates itself.[46]

Despite the continual discussion of the benefits to France of population growth and emigration, particularly to the French colonies, the success of French policies has been confined chiefly to the expansion of her colonial area and not to the expansion of the French population. The area of French dependencies and mandates increased from 4,383,000 square kilometers in 1878, to 10,942,000 in 1913, and 11,820,000 in 1933.[47] Emigration, expressed in absolute terms or relative to the population of the country of emigration, has always been much less from France than from other leading European countries.[48] In 1800-50, between 200,000 and 300,000 French emigrated from France. Between 1820 and 1856, 196,000 went to the United States, much smaller numbers elsewhere, and only an insignificant number to the French colonies and to Algeria before 1848.[49] Between 1850 and 1925 the absolute number of emigrants was apparently somewhat greater than in 1800-50, according to the estimates of H. Bunle[50] (Table XIV). In recent years emigration has declined, only 6.3 thousand emigrating per year outside Europe in 1926-33, compared to 13.8 in 1901-13.[51]

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[42] *L'expansion coloniale* (Paris, 1891), pp. 10-12, 35-36.

[43] *L'exploitation de notre empire colonial* (Paris, 1900).

[44] *Les colonies françaises* (6th ed., Paris, 1899), pp. 2, 6-8. M. Rouxel denied Gaffarel's argument that emigration to the colonies would promote French population growth. See *J.d.e.*, 5th ser., XLI (1900), 442-44.

[45] *L'émigration française aux colonies* (Paris, 1897), pp. 32-51.

[46] *Op. cit.*, pp. 333-34.

[47] See Grover Clark, *The Balance Sheets of Imperialism* (New York, 1936), p. 23. France's modern colonial empire began in a sense with the beginning of the conquest of Algeria in 1830, expanding from about 17,000 square miles in 1815 to 242,000 in 1860. As late as 1871 the French colonies "were weak and scattered units" (Roberts, *op. cit.*, I, 8). H. C. Morris estimates the French colonial area at 750,000 square miles in 1880, 2,387,000 in 1890, and 3,741,000 about 1900. See Morris, *The History of Colonization* (New York, 1900), I, 417-19; also Roberts, *op. cit.*, I.

[48] *A.S.*, L (1934), 254*. France supplied but 557,304 (1.8 per cent of

TABLE XIV. AVERAGE ANNUAL NUMBER OF FRENCH EMIGRANTS BY DECADES, 1851-1935
(in thousands)

Destination	1851–1860	1861–1870	1871–1880	1881–1890	1891–1900	1901–1910	1911–1920	1921–1925
Overseas	11.1	7.2	13.9	21.3	10.0	16.0	12.4	9.9
Colonies	7.0	3.5	6.4	7.9	8.6	4.5	4.3	10.8
Europe	7.0	7.0	15.0	18.0	10.0	24.0	16.4	16.9
Total	25.1	17.7	35.3	47.2	28.6	44.5	33.1	37.6

These figures show that during the entire period 1850-1925 only one-fifth of all the French emigrants went to the French colonies (22 per cent in 1851-80; 17 in 1880-1910; 21 in 1911-25).[52] Had the French government devoted less attention to

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European) emigrants to the United States in 1820-1924; but 497,000, or 1.1 per cent of all European emigrants in 1846-1924. The annual number leaving French ports in 1857-91 exceeded 10,000 only five times. See Willcox, I, 178, 677; Ferenczi, *I.L.R.*, XX (1929), 375; also G. Chandèze, *L'émigration et l'immigration* (Paris, 1898), pp. 96-117.

[49] See Willcox, I, 108-12. Prior to 1853 the statistics are inadequate. *Ibid.*, I, 105 ff.; II, 201 ff.

[50] From Willcox, II, 207. Other writers have estimated the annual French emigration for 1854-60, 1861-80, 1871-80, and 1881-90 at 30, 15, 20 to 30, and 35 thousands respectively (*ibid.*, II, 204-05; also Levasseur, III, 326-31, 352-55, 381). Since, with the exception of the ravages of the phylloxera and bad conditions in French agriculture in the period 1870-1900, France's industrial and economic life was relatively stable, French emigration varied directly with the prosperity of countries of destination and only after 1885 varied inversely to French industrial activity (Willcox, II, 209-13).

[51] Calculated from *A.S.*, XL (1934), 255*.

[52] This was not a unique French experience. Even smaller proportions went from other leading European countries to their colonies. See Clark, *op. cit.*, pp. 9-11.

continental plans and more to the colonies, and had, as a consequence, more capital flowed into the colonies, it is probable that more French would have migrated.[53] Because of the smallness of the volume of emigration to the colonies and despite the fact that natality and natural increase have been greater in the colonies than in France,[54] only about 3 per cent of the colonial population is French and only about one-twentieth of France's citizens live in the colonies.[55]

Some writers still accept the view of Leroy-Beaulieu, Le Play, and the members of the Le Play school that emigration and colonization strengthen the economy of a state and stimulate its natality. This view is well expressed by R. Gonnard:

> In a country which has niggardly and timorous customs, the allurement of emigration is able, through opening more vast horizons to individuals, to combat their Malthusian routines and act favorably upon natality. That which is certain is that, as a general rule, nations which have a great emigration also have a great natality; and, between these two facts, one may consider perhaps that there is not a

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[53] Feis (*op. cit.*, pp. 51, 55-56) estimates that by 1914, despite the fact that colonial legislation favored French capital, only about one-tenth of French capital exports had gone to the colonies. See also Southworth, *op. cit.*, chap. vi.

[54] Deficiencies in statistical data make impossible precise comparison of natality in France with French natality in the colonies. French natality in Algeria fell gradually from 41.0 per 1,000 in 1853-56 to 25.6 in 1896-1900, 25.3 in 1911-13, and 24.9 in 1931. Corresponding rates in France were 25.6, 22.0, 18.8, and 17.5. Corresponding rates in the entire European population of Algeria were 39, 28, 28.5, and 24.3. The French rate in Tunis was 29.5 in 1920-21 and about 32 in 1931. Specific fertility in the European population of Algeria in 1911-13 was higher than in France. In short, natality has remained on a higher level in the French North African colonies than in France. Natality has remained on a higher level in some but not all of the remaining colonies for which data are available. On the French colonial population and movements therein see H. Bunle in *Metron*, IV (1924), 604-704; R. Pearl, *The Biology of Population Growth* (New York, 1925); R. R. Kuczynski, *Colonial Population* (Oxford, 1937); annual returns in *A.S.*

[55] In 1931 the French colonies, protectorates, and mandates contained 64,293,000 inhabitants. Of these, 2,270,000 were European and assimilated; 2,135,000 were French citizens; 1,918,000 were of French nationality, somewhat over two-thirds of these being of French blood. There lived in foreign countries 570,000 French citizens. See *A.S.*, XL (1934), 15, 307, 313, 326, 334, 342. One study suggests, however, that despite her small volume of emigration France has more nationals living abroad relative to her population than Europe as a whole. See *Notizario Demografico*, X (1937), 154-55.

bond of unilateral causality, but a reciprocity of influence. It seems to us to conform to facts to admit that, if natality favors emigration, emigration (moderate and even very great) stimulates natality.[56]

On the whole, however, twentieth-century writers stress, not the natality-stimulating effect of emigration and colonization,[57] but France's capacity to effect "intellectual colonisation," to assimilate and Frenchify foreigners who move into France or her colonies. This view, implied by Levasseur,[58] was developed in 1903 by the Russian, M. Novicow, who predicted that by 2000 A.D. France's strength would consist of 100 to 150 millions under French rule and of many more millions not under French rule, but won to her support by the spread of French culture and of the language and literature of France.[59] A decade later G. Rossignol wrote that "the peopling and the rapid Frenchifying of our colonial empire must then become the dream, the passion of all Frenchmen," and serve as the means of preserving France's international position.[60] In recent years Charles Benoist, L. A. Sigaud, and R. Martial (who advocates peopling the colonies with unemployed immigrants in France) have stressed France's capacity to develop colonies and escape depopulation through assimilating and Frenchifying foreigners.[61] Others have emphasized the need of an assimilative policy in the colonies.[62] The probability of success of such an assimilative policy is great in light of French history.[63]

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[56] *Essai sur l'histoire de l'émigration* (Paris, 1928), p. 286. Recently Gonnard stated that the cessation of emigration from Great Britain had reduced British natality, for "in proportion as the horizon contracts before the individual, the latter cares less and less to raise a large family." See *Revue économique internationale* (June, 1935), p. 513.

[57] It was several times implied in the Chamber of Deputies that the French colonies were not fostering population growth in France. See *Annales de chambre*, II (March 16, 1905), 1169-70; IV (Dec. 23, 1909), 1811-12.

[58] III, 494-96.

[59] *Expansion de la nationalité française* (Paris, 1903).

[60] *Un pays de célibataires et de fils uniques* (Paris, 1913), pp. 290, 314.

[61] See *A.s.m.p.*, 1er sem. (1934), pp. 393-94; *American Mercury*, XXXV (1935), 79; *New York Times*, June 17, 1928; Martial, pp. 332-33.

[62] E.g., G. R. Manne, who points out that since Arabo-Berbers are outbreeding the Christian peoples in Morocco, France must treat as equals all born in Morocco. See *R.d.d.m.* (Feb. 1, 1937), p. 566.

[63] See Martial's works listed in next chapter. A. J. Toynbee writes: "When the modern Frenchman looks abroad upon the World, he divides the

In the present century, emphasis has been placed upon the military importance for France of the demographic resources of her colonies. Although proposed as early as 1883,[64] it was not until 1909 that General Mangin, then a lieutenant colonel of long experience in Africa, emphasized the need and practicality of an extensively organized colored army.[65] Mangin's proposal was approved by some French military leaders and writers who were alarmed at the low birth rate.[66] After 1911 Senegalese regiments formed part of the French Colonial Army. During the war period 1914-18 France recruited in her colonies 198,000 workers and 669,000 soldiers, of whom 184,000 work-

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human family into people who possess, and people who lack, the modern French version of culture; and in his eyes everybody, whatever the colour of his skin, is potentially a cultivated Frenchman. . . . The freedom of the French from race-feeling has been a fact of common knowledge all through the modern age of Western history. . . . Here, in France, we observe a sense of common nationality precluding the consciousness of an objectively existing and empirically observed diversity of race." See *A Study of History* (London, 1934), I, 225, 243. G. Gorer shows, however, that French colonial policies and misrule are depopulating French Equatorial and West Africa. See *Africa Dances* (New York, 1935).

[64] *Le Temps* (April 15, 1883) recommended the organization of an army of colored troops. See Carroll, *op. cit.*, p. 86, note. The Senegalese were trained as soldiers as early as 1823. The celebrated French military leader, the Marechal de Saxe, organized the first French black regiment in the mid-eighteenth century (Mathorez, I, 403).

[65] See Mangin, *Revue de Paris* (July 1, 15, 1909), pp. 61-80, 383-98; *La force noire* (Paris, 1911), Book I, chap. iv, Books II and III, especially pp. 276, 284, 326, 342. By 1928, Mangin said, there would be 86,000 less conscripts available than in 1908 because of the steady decline in natality. This deficit could be counterbalanced by using black troops which had been used throughout history and were being used in contemporary armies. The Senegalese were effective soldiers and could be effectively organized. Africa could supply 55,000 to 150,000 soldiers per year for some time. It was possible to utilize 30,000 to 40,000 Senegalese per year. France could increase her current Senegalese force of 20,000 to 40,000 and then 70,000 very easily. "The organisation of black troops has for its immediate end the maintenance of our actual effectives, imperiled by the decline of French natality; it permits the augmentation of our regiments of Algerian tirailleurs, who co-operate to the same end, and the complete utilisation of Arab and Berber resources."

[66] See A. Chéradame (*op. cit.*, pp. 473-78), who advocated the creation of an African army of 40,000 to 70,000 blacks and Arabs, as Mangin and other military leaders suggested, to counterbalance France's deficiency of recruits. He cited the *Tägliche Rundschau* (Dec. 10, 1911) to the effect that Germany feared the creation of a French black army.

ers and 418,000 soldiers were transported to France.[67] Of those transported to France, 338,000 soldiers and 130,000 workers were recruited in Africa. After the war the use of native troops was accepted as a principle in French military policy, for conscription was imposed on the natives in French West and Equatorial Africa in 1919 and later on those in Madagascar and the Pacific islands. France also reserved the right to drill the natives of French mandated territories.[68] It is probable that at present, if necessary, France could enroll at least a million troops in Africa.[69]

France's reliance upon African man-power makes it essential that she develop good and *protected* means of communication in the Mediterranean, her only means of communication with North Africa and, assuming rail connection, her best means of communication with Equatorial and West Africa. Her Mediterranean naval policy, both as to quantity and as to quality of naval craft, is governed by her dependence upon African colonies.[70] The construction of a trans-Saharan railway, to connect her North African colonies with those in West and Equatorial Africa—a railway of questionable economic significance—has been advocated on military grounds. Thus in 1929 *Le Temps* recommended it as a means of enabling France to tap the demographic and other resources of Africa for the purpose of protection in 1935-39 against Germany and Italy, "two prolific peoples which jostle and menace us."[71]

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[67] Huber, *op. cit.*, p. 100; approximately 7 per cent of France's mobilized military forces in 1914-18 were indigenous colonials (*ibid.*, p. 89).

[68] R. L. Buell, *International Relations* (2d ed., 1929), pp. 313-14, and *The Native Problem in Africa* (New York, 1928), II, chaps. lxiv, lxxvi; A. Girault, *Principes de colonisation et de législation coloniale* (Paris, 1923), II, 380.

[69] The Ministry of War estimates that France can count on 1,500,000 colored soldiers, 600,000-700,000 of whom would be drawn from North Africa and the Senegal. See P. Vitoux, *New York Times*, Aug. 8, 1937.

[70] See *ibid.*; Liddel Hart, *Europe in Arms* (New York, 1937), especially chap. ix; also Hector Bywater, Baltimore *Sun*, July 20, 1928; Major D. H. Cole, *Imperial Military Geography* (London, 1935), pp. 104-10. France's position is strengthened by England's dependence upon her. See *ibid.*, pp. 82, 110-12. French opposition to the restoration of Germany's colonies is based not only upon Germany's pro-natality and nationalistic policies (see *J.d.e.*, July-Oct., 1936, pp. 471-79, 494-95; *Revue économique internationale*, Sept., 1936, pp. 485-504), but also upon the fear that colonies would become "a foyer of agitation against the Franco-English power" (*R.d.d.m.*, March 15, 1937, p. 292). It is now predicted by French military experts that France may have to fight her share of the next world war in Africa (Associated Press report in Durham [N. C.] *Herald-Sun*, Feb. 20, 1938).

In recent years the earlier optimistic appraisals of the value of colonies to France have been questioned on both economic and military grounds. A. Vallet, who has expressed regret that French emigrants generally go to other places than the French colonies,[72] has characterized Madagascar, the Asiatic, Pacific, and American colonies as of no worth to France; he describes as most useful, for economic and demographic purposes, the African colonies.[73] J. Bourdon, in general an advocate of the view that France's position as a great power depends upon the development and strength of her colonies, stresses the limitations to their immediate and ultimate military effectiveness. France can neither develop her colonies rapidly nor safely draw from them a great colonial army. She lacks the resources wherewith economically to equip a great colonial army in the modern manner. Moreover, native peoples make less satisfactory soldiers than do the French.[74] Finally, military service unfits the colonials for agriculture, etc., in the colonies and tends to make them less submissive to French rule. "To recruit a great indigenous army is to prepare the revolt of our colonies."[75] To these arguments one may add that at present a considerable number of troops must be kept in the colonies to preserve order; that France's differential advantage would be reduced or destroyed if her potential enemies were to develop counterbalancing colonial forces (e.g., Mussolini in Ethiopia and Libya); that modern warfare[76] requires not mere numbers but a skilled personnel and complicated equipment.

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[71] Cited in *New York Times Magazine*, Jan. 6, 1929; see also Cole, *op. cit.*, p. 106, and map facing p. 112. In the present Spanish Civil War, seeming French upper-class interests have got the better of French Mediterranean strategy.

[72] *Un nouvel aperçu du problème colonial* (Paris, 1923), pp. 206-09; A. Girault *(Principes de colonisation et de législation coloniale)* also comments on France's inability to people her colonies, as does R. Sorel, *J.d.e.* (July-Oct., 1936), p. 495.

[73] *Op. cit.;* see Southworth's criticism of Vallet's reasoning, *op. cit.*, chap. ix, pp. 194-99; also Clark, *op. cit.* Also M. M. Knight's careful analysis, *Morocco as a French Colonial Venture* (New York, 1937).

[74] See also the testimony of military experts to this effect (M. Levé, *R.p. et p.*, CXI, 1923, 373). For an optimistic view of the resources of France's colonies and allies see R. J. Pierre, *J.d.e.* (March-April, 1936), pp. 141-42.

[75] See Bourdon, *Mercure de France*, CCXXX (1931), 513-30. See also Sigaud, *loc. cit.*

The material presented in this chapter indicates, as we stated at the outset, that whereas the colonial theory and policies of other European countries were shaped in part by their having available a "surplus" population allegedly in need of places to go, French colonial theory and practices have been shaped by the failure of the French population to grow rapidly and at the same pace as the populations of other great powers. French advocates of colonization, therefore, urged that colonial expansion not only could be accomplished, despite France's slow rate of increase, but would so improve the economic outlook of French parents as to induce an increase in natality and natural increase. The development of emigration from France would have a similar effect and would spread French influence. The creation of a colonial empire would restore and preserve France's prestige as a great power and counterbalance her inability to expand on the Continent. Colonies would prove a seedbed for the French population and a source of both French and native military strength in times of need. The capacity of the French to spread their culture and to assimilate other peoples would enable them both to Frenchify the non-French populations of their colonies and to engender pro-French feeling among peoples not under French rule. While some of these hopes have not been realized, it remains true today that the role of colonies in French economic life is conditioned very much by the internal demographic condition of France.

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[76] On changed requirements of war see Hart, *op. cit.*, especially pp. 52-54, 236, 264-65, 274; *Paris; The Future of War* (New York, 1925); also note 45 in Chapter XI, below.

CHAPTER IX

IMMIGRATION, IMMIGRATION POLICY, EFFECTS

For more than a half century the stream of immigration pouring into France from other European countries has served to counterbalance the low natality and low natural increase in France. In this chapter we shall describe the volume, the origin, the causes, and the consequences of this immigration and the various interpretations placed upon it by French publicists and social scientists.

The net immigration to which we refer began to develop about 1840. Prior to 1840 emigration, though small, apparently was not counterbalanced by immigration. In the eighteenth century, according to such observers as Moheau, emigration exceeded immigration, despite governmental efforts to check the former and stimulate the latter.[1] Moreover, in the two preceding centuries internal conditions several times gave rise to continued net emigration. The distribution of various racial indices throughout the French population indicates, however, that the present French people is the product of centuries of intermixture of a variety of races and sub-races brought into contact by migration.[2]

The volume of net immigration seems to have risen irregularly after 1840 until in the 1920's it approximated 200,000 per year, or twenty times that observed in the 1840's.[3] On the eve of the World War, France was experiencing an annual influx of about 50,000 permanent immigrants. In 1920-30, recorded immigration approximated 1,916,000, and unrecorded 440 to 660 thousands; 70 per cent of the former and somewhat less than 70 per cent of the latter remained in France. Annual net immigration during the post-war period has been four times that in immediate pre-war years and ten times that in 1850-90. In addition to permanent immigration, France was experiencing each year a seasonal[4] influx of about 90,000 workers (Belgians, Spaniards, Italians), chiefly agricultural, before the war; in post-war years the seasonal influx ranged from 10,000 to 40,000 per month, the cumulative total exceeding that in pre-war years.[5]

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[1] See Levasseur, I, 280-82; Mauco, pp. 4-14; and Mathorez, I and II. Mathorez shows why and to what extent different national groups entered France and what economic and other roles were played by these groups. In the eighteenth century immigrants into France settled chiefly in French seaports and large cities.

[2] See G. Montaudon, *L'ethnie française* (Paris, 1935); also A. L. Guerard, *French Civilization from Its Origin to the Close of the Middle Ages*, pp. 134-36; Martial, *Race*, Parts I-II.

[3] The estimates of net immigration differ. H. Bunle (see Willcox, II, 220) estimates the volume at not less than 338,000 in 1851-72, 426,000 in 1872-91, and 523,000 in 1891-1911. According to another set of estimates, net migration in thousands aggregated +170 in 1881-86; −66 in 1886-91; +385 in 1891-1901; −20 in 1901-06; +260 in 1906-11; +500 in 1911-21; +1125 in 1921-26; +830 in 1926-31 (Census, 1931, I, Part I, p. 55).

Net immigration has provided an increasing proportion of population growth in France. In 1851-1911 net immigration contributed over a million persons to the French population—a number equal to approximately one-third of the recorded excess of births over deaths, about 3.9 millions. Since 1911 the volume of net immigration has greatly exceeded the excess of births over deaths. During the entire period 1850-1930, net immigration supplied France with about 1¾ as much population growth as did the excess of births over deaths, this excess approximating only 2 million, in contrast to a net immigration of about 3½ millions.[6]

According to appreciably revised figures recently published (*A.S.*, LI, 1935, p. 252*), net migration in thousands aggregated +90 in 1846-51; −36 in 1851-60; −300 in 1861-70; +555 in 1871-90; +571 in 1891-1910; +500 in 1911-20; +1955 in 1921-30. About 1930 France contained 8.3 per cent and Europe 21.6 per cent of the 28,869,000 reported world foreign population. See *Notizario Demografico*, X (1937), 154.

[4] Early in the nineteenth century France had a domestic migratory labor supply of 175-200 thousands, one-half of whom were agricultural, who moved each year from the highly subdivided Massif Central and Alpine departments into the Parisian and Mediterranean regions. Continuous emigration and falling natural increase subsequently cut this seasonal migratory stream. See G. Mauco, *Les migrations ouvrières en France au début du XIX*^{e} *siècle* (Paris, 1932).

[5] Mauco, pp. 140-41; Huber, pp. 76-79. Before the war about 30,000 foreign workers crossed the border each day to work in France; in 1926, 41,000; in 1931, 58,000. This number was offset in part in 1931 by the fact that 22,000 persons residing in France worked outside France. See *ibid.* and Census of 1931, I, Part III, pp. 88-90.

[6] Cf. figures on net immigration with those on natural increase. According to Bunle, net immigration has provided the following percentages of total

The growth in the volume of net immigration is reflected in the absolute and relative number of foreigners in France, 97 per cent of whom as of 1931 were born outside of France. The absolute number of foreigners in France increased from 379,000 in 1851 to 2,891,000 in 1931. In 1931-36 the foreign population diminished 437,000, totaling 2,454,000 in 1936. Only 105,000 of this loss is attributable to net emigration; naturalization and acquisition of French nationality account for nearly all of the remaining loss of 332,000. The proportion foreigners constituted of the population rose from 1.05 per cent in 1851 to 2.87 in 1891, 2.86 in 1911, 3.78 in 1921, and 6.91 in 1931; it fell to 5.85 in 1936.

Some nations have contributed relatively more immigrants than have others. Thus in 1921-30 of the two million registered immigrants, 30 per cent were Italian; Poles, 20; Belgians, 18; Spaniards, 15; Czechoslovakians, 3. In the present century the relative number of immigrants of Belgian, German, Italian, Austro-Hungarian, Swiss, and Dutch-Luxemburger origin has declined; that of Russo-Poles, Spaniards, Africans, and Asiatics has risen. The cumulative effect of the changing volume of immigration by nationality is evident in the figures in Table XV on the absolute number of foreigners in France in representative years.[7]

The influx of immigrants into France was until recently a "spontaneous" movement of individuals, chiefly of persons who came to France to enjoy higher wage and income levels and greater political freedom than were obtainable in the countries

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population increase in France: 1851-61, 13; 1861-66, 20; 1872-76, 10; 1876-81, 23; 1881-86, 27; 1886-91, 80; 1891-96, 63; 1896-1901, 30; 1901-06, 43; 1906-11, 60; 1921-26, 74. See Willcox, II, 235. In 1926-31 the percentage was 76.

[7] Data in Table XV and in the two preceding paragraphs are taken or computed from Mauco, pp. 38, 141, 143; *A.S.*, L (1934), 14; Census, 1931, I, Part II, pp. 55, 57, 65, Part V, chap. i; *Bulletin*, S.G., XXVI (1937), 281-82. The figures in Table XV are for "present" population in 1881, 1911, 1921, 1931; for "legal" or habitually resident population in 1926. The "legal" population in thousands was 1,000 in 1881, 1,133 in 1911, 1,550 in 1921, 2,891 in 1931; "present" was 2,409 in 1926. The percentage foreign in text is based on the "legal" returns. The census returns of aliens in France somewhat understate the true number (Mauco, *I.L.R.*, XXXIII, 1936, 185).

TABLE XV. FOREIGNERS IN FRANCE, 1851-1931
(in thousands)*

Nationality	1851	1881	1911	1921	1926	1931
Italian	63	241	419	451	760	808
Belgian	128	432	287	349	327	254
German, Austro-Hungarian, Czech	57	94	120	82	121	148
Spanish-Portuguese	30	75	107	276	351	401
Swiss	25	66	73	90	123	98
Russian, Polish	9	10	35	79	376	580
Dutch, Luxemburger	......	21	26	36	39	31
African	......	......	3	38	72	105
Asiatics	......	......	1	20	69	92
Others	67	62	89	111	267	198
Total	379	1,001	1,160	1,532	2,505	2,715

*Asiatics include Turks and Armenians (65,000 in 1931) and French Asiatic subjects (8,000 in 1931). Of the Africans, 102,000 were French subjects.

whence they emigrated. For in France, after the French Revolution and the destruction of the corporative system which lasted until the close of the *ancien régime,* foreigners who came to France enjoyed many of the rights and privileges of French citizens.[8] Although the foreigners' status was later circumscribed somewhat by laws and decrees,[9] it remained essentially satisfactory, and no impediments were placed in the way of the potential immigrants. Therefore immigrants came in considerable numbers to avail themselves of opportunities in France, opportunities traceable in part to the low French rate of natural increase.[10]

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[8] Foreigners could not receive or bequeath property under the *ancien régime* unless invested with this right by letters of naturalization or treaties. The Constituent Assembly suppressed this disability (i.e., the *droit d'aubaine*) in 1790 and gave foreigners the unconditional right to receive and bequeath property; the suppression was confirmed again in 1819. Under the *ancien régime* in general, no one, not even a French subject, was in principle eligible to fabricate products unless invested with royal privileges, or a member of a recognized corporation. One of the most important consequences of the proclamation of the principle of economic liberty by the Constituante in 1789 and 1791 was that everyone was able, at his own risk, "to apply himself in France in any industry, with *no distinction between French and foreigners.*" See P. Pic, *R.d.e.p.*, XVI (1902), 481, his italics; see also Levasseur, III, 401-02; J. S. Schapiro, *Condorcet and the Rise of Liberalism* (New York, 1934), pp. 10-13; Sagnac, pp. 246, 251-52.

[9] In 1888 it was decreed that foreigners, planning to establish residence in France, must within fifteen days file with the mayor of their intended place of residence, information as to family, nationality, and profession; foreigners were required to file this information each time they changed place of residence. Penalty for non-filing was light; foreigners entering France for an allegedly temporary stay were not subject to the decree. The law of 1893 required each employment-seeking foreigner, within eight days of his arrival in a place, to register with mayor of the place who entered his name on the *"register d'immatriculation des étrangers."* Both employers who knowingly employed non-registered foreigners, and foreigners who failed

At the beginning of the present century French employers, noting a slight decline in the annual volume of immigration and a supposed deficit of labor (a deficit allegedly attributable to low natality), undertook to promote and regularize the human inflow. Industrialists gave attention to the problem as early as 1900, but not until 1911 was a relatively effective collective recruiting service established by the *Comité des Forges* to introduce Italian workers. French agricultural societies sought to encourage the immigration of Polish workers as early as 1906. Only 25 to 30 thousands of Poles and Italians were introduced into France through these two collective efforts, however.[11]

With France's entry into the World War, the demand for immigrants and their labor greatly increased, for many immigrants living or working in France returned to their home countries and many French workers were mobilized for military service. As a result of inter-ministerial discussions of the problem in 1915, the Ministries of Labor and Agriculture undertook in 1916 to recruit a foreign labor supply. By December 1, 1916, about 192,000 workers had been introduced; by the end of 1918, about 450,000, of whom one-half came from European countries, and one-half from China and the French colonies.[12] Dur-

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to register or registered falsely were subject to fines, none exceeding 500 fr. Under the law, as modified in 1912, the foreigner was required to indicate his place of residence and secure a matriculation certificate entitling him to work. Under the decree of 1917, no foreigner, over 15, could remain over two weeks without an identification card. See Pic, *op. cit.*, pp. 482-94; Mauco, *op. cit.*, p. 59. The law of 1893, as modified in 1912, was again modified by the law of August 11, 1926, which was the basis of immigration control until the depression. See note 16, below.

[10] "The feeble increase of the French population leaves gaps in industrial employments that the foreigners come to fill, attracted by the elevated rate of wages." See Levasseur, I, 345; see also G. Lagneau, *A.s.m.p.*, CXXI (1884), 130-33.

[11] Mauco, pp. 60-65; Bunle, in Willcox, II, 221.

[12] Huber, *op. cit.*, pp. 199-205; Mauco, pp. 70-74. Algerians began to emigrate to France about 1907, their number increasing from 3,000 in 1911

ing the entire period, 1914-20, according to Bunle, about 1,150,000 immigrants entered France, of whom about 600,000, including 50,000 Chinese and Colonials (chiefly North Africans), remained.[13]

The post-war period witnessed a marked increase in the control over and promotion of immigration and in the volume of net immigration. For at the close of the war it was generally believed that France's labor supply was inadequate and that immigrants should be sought in countries where unemployment existed and where population pressure was increasing as a result of natural increase and restrictions on immigration into the Western Hemisphere.[14] The French government collaborated (after 1923) with associations of French industrialists and agriculturists seeking foreign labor, expanded immigration-recruiting services, and assured the governments of emigrant-sending lands, by means of conventions and treaties (9 by 1930, plus several put into effect since 1930, plus occasional other provisions in French international agreements), that the nationals of these lands would be treated in France virtually as Frenchmen, subject, however, to the provisions of contracts entered into under the aegis of treaties. Under these comprehensive bilateral agreements, it is generally provided: (a) that labor recruiting in treaty countries will be conducted according to arrangements designed to protect both workers and employers in each country and the economic interests of each country; (b) that foreign

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to 10,000 in 1914, 38,000 in 1923, and 60,000 in 1927. Many of these are seasonal. In 1925 the Algerian government, feeling a need of labor in Algeria, sought to check this efflux. See Huber, *op. cit.*, pp. 790-95. The Moroccans migrate to Algeria for the same reason that Algerians go to France, namely, higher pay. See *I.L.R.*, XXXII (1935), 396-400.

[13] Willcox, II, 228. We ignore the exodus of aliens (about 180,000 in 1914-18), the return of 100,000 French from abroad, and the influx in 1915-20 of about 200,000 refugees.

[14] Mauco, pp. 90-110. Mauco estimates (pp. 78-80) that at the close of the war France possessed 2,800,000 less units of adult labor than on the eve of the war. The war destroyed 1.8 millions; the eight-hour law of 1919, the equivalent of 1.0 million. In pre-war France in 1911-21 deaths (about 1,300,000 of which were war casualties) exceeded births by about 2,500,000; net immigration approximated 500,000; net population loss, 2 millions. Alsace-Lorraine brought France 1,710,000 population. The 90 departments composing post-war France had 2,269,000 less population in 1921 than in 1911. See Huber, pp. 448-49, 454-56.

workers in France will be treated as Frenchmen, paid on the same basis, and protected by French labor and social legislation; (c) that individual contracts whereunder foreign workers enter France will conform to model employment contracts which embody the protection contemplated in the bilateral agreements.[15] The total number of immigrant workers and their occupational composition have been regulated in ways designed to prevent overcrowding the French labor market with any particular kind of labor.[16]

With the increase of cyclical unemployment after 1930 politicians, administrators, and publicists became increasingly hostile to foreign labor. Some even advocated revocation of the treaties described above. This hostility led to the passage in 1932 of a law designed to preserve the "home market" for French labor. Through this law and earlier regulatory provisions, the number of work permits and the number of jobs allowed foreigners have been limited. Since permits are issued or renewed only if there is no unemployment in an occupation, the issue both of new permits and of renewals has been checked, renewals having been denied in general to all alien workers in France less than two years and frequently to those in France more than two but less than ten years. The number of jobs (and indirectly the number of work permits) has been limited by decrees fixing by occupation and district (following consultation with employers' and workers' associations) the relative number of foreigners who may be employed. Although in theory only alien workers with permits can be employed and aliens without permits may be required to leave, not all such have been compelled to leave. Some presumably retain jobs. Some receive unemployment relief in accordance with treaty stipulations. Some remain in France either because they lack funds to leave or because they cannot enter other countries. For while the Ministry of Labor deems advisable the repatriation of aliens, who have long been unemployed and are without support, family, or sufficient grounds for remaining in France, the French government has not appropriated sufficient moneys to finance the repatriation of all aliens falling within this class. Moreover, aliens sentenced to deportation are seldom deported, instead being committed to jail again and again for failing to obey deportation orders. Despite the failure to remove from France all aliens susceptible of removal, repatriation aids and the pressure of unemployment and want have caused many alien workers and some alien professional men to leave. The refusal to grant work permits has kept out potential immigrants, and stricter border control has reduced illegal entry. The net effect of these various checks has been to reduce the foreign population.[17]

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[15] See International Labor Office, *Migration Laws and Treaties;* Mauco, chap. vi and pp. 577-88; Huber, pp. 796-802; J. Secretan, *I.L.R.*, XXVII (1933), 744-64.

[16] Under decrees issued since the war a foreigner, while freely admissible if in possession of a passport, is required, if he is over fifteen and desires to remain in France over two months, to secure an identification card from the proper official in his French place of residence. Moreover, under the law of 1926, no employer can hire a foreigner not in possession of an identification card; no employer can hire a foreigner who has not completed the work contract in virtue of which he was originally admitted; no foreign worker can obtain employment, for one year at least, in any occupation other than that specified in the work certificate issued to him upon entry and visaed by the Ministry of Labor or of Agriculture. Accordingly, foreign workers have been able to obtain cards of identification and work certificates only when employment has been available; and foreign workers have been prevented from entering crowded occupations, or shifting (when such shifting is not desired) from one occupation (say agriculture) to another (say industry). See Huber, pp. 796-98; Mauco, chap. vi; files of *Industrial Labor Information;* also next footnote.

The direct and indirect effects of the depression upon immigration may be summarized under three heads. First, the sensitivity of immigration to economic conditions,[18] coupled with the restrictive measures described above, has checked the coming of foreigners, especially of those suited to nonagricultural occupations, and has increased the number leaving.[19] Second, France has escaped supra-"normal" unemployment and the burden of supporting the unemployed in a greater degree than other lands; for since France's "reserve army of workers is kept outside the country, it can draw on it to the extent of its requirements at any given moment, without being responsible for the maintenance of the reserves it does not require."[20] Third, the failure of France to bear the full burden of unemployment among aliens and to deal as humanely and rationally as possible with the alien unemployed may reduce France's capacity to attract immigrants in the future unless better treatment of unemployed aliens is assured; it will certainly check the assimilation of needy aliens and their conversion into useful citizens.[21]

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[17] See Mauco, *I.L.R.*, XXXIII, 185-93; I. Ferenczi, *Revue économique internationale* (Dec., 1936), pp. 469-78; *R.d.e.p.*, XLIX (1935), 1124, L (1936), 1158, 1166-67; A. Audinet, "Chronique de jurisprudence française sur la condition des étrangers," *Revue critique de droit international*, XXXI (1936), 45 ff.; W. Oualid, *ibid.*, pp. 7-20; H. de Sevelle, *Affaires étrangers*, V (1936), 604-11; *Bulletin du Ministre du Travail* (Jan.-March, 1936), pp. 58 ff.; files of *Industrial Labor Information* (1931-37). In 1935, when labor camps were established for French unemployed, it was provided that registered unemployed foreign workers could be admitted if the quota fixed for unemployed Frenchmen was not filled; and that foreign workers who refused employment in the labor camps would have their labor permits cancelled and their names eliminated from the public fund lists (see *M.L.R.*, XL, 1935, 1184).

[18] This sensitivity manifested itself in 1927 when, upon the stabilization of the franc, emigration for a time exceeded immigration. Mauco writes

The foreign population is unevenly distributed geograph-

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that "the curve of immigration, seasonal as well as annual, industrial as well as agricultural, reflects without ceasing the rhythm of the laborious life of the country" (pp. 140-41).

[19] Net average annual immigration totaled at least 121,000 in 1928-30; net average annual emigration totaled 23,000 in 1931-36, emigration exceeding immigration after 1931. Data on controlled foreign worker migration indicate that while the gross number entering France fell after 1931, the influx exceeded the efflux by 26,000 in 1931-35; 13,500 Algerians left in 1931-34 (*A.S.*, 1934-35). Despite prevailing unemployment in nonagricultural industries, the average annual number of foreign agricultural workers, many of them seasonal, entering France during the depression remained at about 80 per cent of the 1931 level. For the unemployed French urban workers are either unable or unwilling to engage in agriculture. See P. Fromont, *R.d.e.p.*, XLIX (1935), 792-93; *A.S.* (1934-35). In 1937 net worker immigration aggregated 47,378. Of the 67,905 immigrants introduced into France, 73 per cent came from Belgium and Poland; 53,908 entered agriculture, the remainder going into industry. Of the Belgian immigrants, 9,468 and 15,893 entered industry and agriculture respectively; of the Poles, 1,635 and 22,553. See *Bulletin*, S.G., XXVII (1938), 168.

[20] W. Woytinski, *Three Sources of Unemployment*, I.L.O., ser. C, No. 20 (Geneva, 1935), p. 103. Despite this shunting of unemployed to foreign lands, the reduction in the relative number of women workers, and the steadily diminishing relative volume of young persons reaching an employable age, unemployment in France approximated 6 per cent of the population by 1932 (*ibid.*). In 1936, according to M. Boverat, foreign unemployed numbered 500,000. It is said, however, that a reduction of wages to an "economic" level in various industries would promote the absorption of many of these unemployed foreigners. See *R.d.e.p.*, L (1936), 600.

[21] Mauco, *I.L.R.*, XXXIII, 190-93.

ically and occupationally. The relative number of foreigners in the population in 1931 ranged, by department, from a fraction of one per cent to 30 per cent. Of 2,715,000 foreigners "present" in France in 1931, 633,000 were in the Parisian region; 547,000 on the Mediterranean coast; 495,000 on the Belgian frontier; 322,000 on the eastern frontier; 180,000 in the Alps and Jura; 180,000 in the Pyrenees and Garonne Valley; 133,000 in the region of Lyons. Only 228,000 were in the remaining 40 departments.[22] Within the 45 departments of foreign concentration in 1931 lived 62.2 per cent of the entire population, 60.1 of the French, and 89.6 of the foreign; 9.96 per cent of the population of these 45 departments was foreign in contrast with 1.94 per cent in the remaining 45 departments. Within the 10 departments ranking highest in absolute number of foreigners in 1931 lived 58.1 per cent of the foreign population, 31.3 per cent of the French, and 33.1 per cent of the entire population; 12.1 per cent of the population in these 10 departments were foreign.[23] The present uneven distribution of the foreign population is not recent, having prevailed already 50-75 years ago.[24] The naturalized French, numbering 361,000 in 1931, are also unevenly distributed. Within the Parisian region are 99,000; along the Mediterranean, 99,000; within the northern and eastern frontier departments, 103,000; within the Jura-Alps, Pyrenees, Garonne Valley, and region of Lyons, about 47,000. Only 19,000 are found in the remaining 40 departments.[25] The data on the distribution of the foreign population suggest that foreigners who do not feel the pull of Paris tend to settle near the frontier, rather than to seek places in the interior; moreover, they settle along the frontiers nearest to the country of origin. Since the World War, however, there has been a greater tendency to settle in the interior.[26]

Data presented in Table XVI indicate that the foreign gainfully employed are distributed among occupations in different proportions than the French and that the pattern of distribution has changed. The heaviest relative concentration is in mining and quarrying, wherein the relative number of foreign gainfully employed is five times as great as in all occupations combined; they are relatively one-half more numerous in manufacturing than in all occupations; they are relatively least numerous in fishing, agriculture, and personal service. Within the category of foreign employed the most significant relative increases since 1906 have taken place in agriculture, mining, and public service; the most significant decreases, in personal service, commerce and banking, and transportation (see columns 2-3). The most marked increases in the relative importance of foreign workers in specific occupational categories in 1906-31 have been in public service, in mining and quarrying, in agriculture, and in manufacturing (see columns 5-6). These changes are due in part to the change in the ethnic composition of the foreign population, for each ethnic group has favored certain occupations. In 1891 one-half of the foreign workers were in industry; one-

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[22] Census, 1931, I, Part V, p. 11.
[23] Computed from Mauco, pp. 150-51; *A.S.*, L (1934), 3.
[24] Levasseur, I, 344-45.
[25] Census, 1931, I, Part V, p. 14.
[26] Mauco, pp. 155-57, 160-72.

TABLE XVI. DISTRIBUTION AND RELATIVE IMPORTANCE OF FOREIGN GAINFULLY EMPLOYED, BY OCCUPATION (BOTH SEXES)*

Occupation	Distribution of foreign gainfully employed among occupations, in per cent		Per cent foreign gainfully employed form of all gainfully employed, by occupation	
	1931	1906	1931	1906
Fishing	....	0.1	0.89	1.15
Forestry Agriculture	16.2	12.7	3.27	0.89
Mines Quarries	10.4	3.1	37.82	6.84
Manufacturing	48.8	47.1	11.45	4.86
Transportation†	4.7	7.5	7.17	5.22
Commerce Banking	9.7	14.3	5.79	4.41
Liberal Professions	2.6	3.6	6.44	4.53
Personal Care Domestic Service	4.2	11.2	7.73	6.85
Public Service	3.4	0.4	4.27	0.18
All	100.0	100.0	7.35	2.98

*Census, 1931, I, Part V, p. 52.

†Includes "*manutention.*"

fifth were in agriculture; one-fifth were in commerce and transportation; 4 per cent were in the liberal professions.[27]

In France, as in the pre-war United States, foreigners have tended to concentrate in more arduous and "coarse" occupations which French workers, having become increasingly aristocratized or bourgeois in outlook, are abandoning in an increasing degree for professional, specialized, and less onerous employments.

> It is a proved fact that in the roughest, dirtiest, and most dangerous trades and in the most barren and isolated districts work can be carried on only by recourse to alien labor.[28]

This tendency on part of immigrants to crowd into less desirable occupations has apparently become more pronounced in recent years as the ethnic composition of the immigrant stream has changed and the French population has felt in an increasing degree the force of "social capillarity."[29] The broad trends are depicted in Table XVII. Since 1906 relatively the greatest increase has been in the foreign labor group. Today proprietors are 32 per cent as frequent in the foreign as in the French em-

TABLE XVII. FRENCH, FOREIGN, AND NATURALIZED GAINFULLY EMPLOYED ACCORDING TO STATUS, 1906-31 (BOTH SEXES)*

Status	Per cent of each group in each status								Per cent foreigners form of each stratum			
	All		French		Naturalized		Foreign					
	1931	1906	1931	1906	1931	1906	1931	1906	1931	1921	1906	% change 1906–1931
Proprietor	28.9	30.3	30.5	31.0	22.5	19.5	9.6	11.7	2.4	1.8	1.2	+100.
Employé	14.0	10.2	14.4	10.3	11.9	10.8	9.4	7.7	4.9	3.4	2.3	+113.
Laborer	42.3	38.2	40.2	37.5	46.2	45.3	67.6	56.6	11.8	6.2	4.4	+168.
Isolated	12.7	20.1	12.9	20.1	15.9	22.4	9.8	21.9	5.7	3.9	3.2	+ 78.
Unemployed	2.1	1.2	2.0	1.1	3.5	2.0	3.6	2.1	12.9	6.4	5.5	+135.
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	7.4	4.2	3.0	+147.

*Census, 1931, I, Part V, pp. 59-60.

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[27] See Census, 1931, I, Part V, pp. 52, 74; Mauco, pp. 48, 194 ff.

[28] Mauco, *I.L.R.*, XXXIII (1936), 186.

[29] See W. Oualid, *R.d.e.p.*, XLII (1928), 1474-79; S. Wloceoski, *ibid.*, XLIX (1935), 327 ff.; Mauco, pp. 461 ff.; Nas, *R.p. et p.* (March, 1904), pp. 474-500; also S. Wloceoski, *L'installation des Italiens en France* (Paris, 1934).

ployed population; employés, 66; laborers, 190. In 1906 the corresponding percentages were 38, 75, and 151. Relatively the greatest increase has occurred in the laborer group.

Although the foreign working population was considered absolutely important before the war, when foreigners comprised about 3 per cent of the gainfully employed, in contrast to 7.4 per cent in 1931,[30] it has only been in the post-war period that immigrant labor, though less efficient than French labor,[31] has been looked upon as an integral and ineradicable part of the French economy. In the 1920's immigrant labor was looked upon as a corrective for war losses, "under-natality," and the decline in agriculture, and as the force that set the economic "mechanism" going in the 1920's.[32] Recently, when French politicians proposed to relieve unemployment by sending immigrants to their motherlands, it was observed: (1) that about 40 per cent of the foreign population is concentrated in 5 per cent of the communes, all located somewhat inside the French frontier, where they perform types of labor which the domestic population has not been supplying; (2) that in general foreign workers do the type of work which the natives refuse to do; (3) that there is a definite shortage of labor in agriculture and domestic service, and barely enough in a number of other lines; (4) that were the foreign workers sent home, the present inter-industrial disequilibrium would be aggravated, not relieved.[33]

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[30] Foreign males formed 3.2 and 9.4 per cent of all employed males in 1906 and 1931; foreign females, 2.6 and 3.9 per cent of all employed females in 1906 and 1931.

[31] British, Swiss, Belgian, and Italian workers are considered best; Poles, Spaniards, Portuguese, and Russians are ranked second; Armenians, Greeks, and North Africans are ranked lowest. Ranking varies with occupation, however, Poles, Germans, and Czechs rating best in some occupations. See Mauco, pp. 270-83; Bunle, in Willcox, II, 234-35.

[32] J. Morini-Combi, *R.d.e.p.*, XLVI (1932), 74-94; Wloceoski, *ibid.*, XLIX (1935), 327-28; Mauco, pp. 461-69. H. Peyret shows with respect to four departments, as have other writers with respect to certain other departments, that immigration has caused the amount of land under cultivation to double and the price of land to rise. *J.d.e.* (April 1, 1935), pp. 230 ff.; also Huber, pp. 840-55. Alien settlers cultivate at least 600,000 hectares in France.

[33] Wloceoski, *R.d.e.p.*, XLIX (1935), 324-60; R. Gonnard, *Revue économique internationale* (June, 1935), pp. 501-22; I. Ferenczi, *ibid.* (Dec., 1936), pp. 475-76; Mauco, *I.L.R.*, XXXIII (1936), 186.

Controversy as to the value to France of immigration is not recent. In the early part of the nineteenth century, following the Napoleonic wars and the dissolution of revolutionary humanitarian sentiments, little attention was given to immigration as such, economists and social scientists devoting themselves chiefly to attacks upon and defenses of Malthusianism. In the closing third of the nineteenth century, following the defeat of France by Prussia and the growth of alarm at France's low level of natural increase, a few writers (e.g., Leroy-Beaulieu) favored a limited amount of immigration as a means to counterbalance low natality and release some population for the French colonies. The liberal economists who favored some immigration were content to answer arguments against immigration rather than to develop a positive case for it. It was said, for example, that immigration saved France the cost of raising children and replacing her population;[34] that the immigrants did not compete in an appreciable degree with French labor but rather performed the types of work disliked by the French, or took the places of French workers "who had not been born"; that the industrial development taking place in France permitted the employment of a certain annual influx of immigrants in ways not prejudicial to the economic interests of French workers.[35]

Immigration was not subjected to attack until the closing third of the nineteenth century after the number of immigrants in France had increased and alarm had developed concerning the future growth of the French population. The attacks were of two sorts: (a) upon immigration as such; (b) upon immigration as a substitute for natural increase. The attacks were based upon economic, demographic, racial, cultural, and militaristic grounds.

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[34] The present net gain to France is difficult to determine. Mauco estimates the capital cost of an adult worker at 20,000 francs. It costs about 600 francs above the overhead cost of recruiting agencies to introduce a Central European worker. Immigrant remittances annually exceed by more than two million francs the capital foreigners bring with them. See Mauco, *I.L.R.*, XXVII (1933), 781-82. Such net remittances injure France and French labor only in proportion as they retard the rate of capital accumulation.

[35] G. de Molinari, *J.R.S.S.*, L (1887), 190 ff.; R. Gonnard, *Essai sur . . . l'émigration*, pp. 319, 322-24. Gonnard here repeats arguments that he presented in 1901.

The most intensive attack came from spokesmen for the French worker who charged that immigrants were "robbers of national labor" in that they were docile, ignorant, disinclined to join labor unions, and willing to work for lower wages than the French workers. As a consequence of this growing opposition to immigrant workers—an opposition that precipitated a number of strikes—many legal measures, designed to restrict immigrant competition, were proposed in 1880-1914. Among these measures were proposals to repatriate all foreign immigrants not assured of steady work; to impose either uniform direct or nonuniform direct taxes upon all foreign workers or immigrants, for the purpose of reducing the number of immigrants and of compelling the foreign workers to ask for higher wages; to impose taxes on employers of foreign labor in such a way that the wage paid the foreign worker plus the tax paid for the privilege of employing him would at least equal the wage paid to or desired by native workers; either to fix minimum wages for all types of labor, or to require that native and foreign workers be paid at the same rate or on the same basis; proposals to limit the number of foreigners permitted either to work on certain types of projects, or to engage in various occupations. In general, although these proposals were supported by the working classes and by many persons not of the working class, they were rejected in part because they were departures from laissez faire, in part because the workers and their supporters were politically weaker than the employing classes. Only one important measure was put into effect before the war, a decree of 1899 which fixed at 5 to 30 per cent the proportion of workers, on projects being executed for the state, who might be foreign.

After the World War opposition to immigrants was renewed, but apparently with less relative vigor than before the war. This opposition, which assumed the form of proposals to tax foreign workers and to limit their employment, came not so much from the workers and the mass of the French people as from the petite bourgeoisie, the liberal professions, certain peasant groups, and office-seeking politicians.[35a] As we have already indicated, however, this opposition led to no controls other than those designed to regularize the inflow until the depression led to the law of 1932 and a few hundred decrees limiting the relative number of foreigners employable in occupations and districts. Prior to 1935 the proportions ranged by place and occupation from 2-5 per cent (among carpenters and technicians) to 75 per cent (among glaziers in the Seine). In 1935 alone 221 decrees were put into effect to limit the proportion of workers in various occupations who might be foreign. The average proportion fixed by these decrees was 5 to 10 per cent, the range from one to 30 per cent, if exception is made of several trades in which the per cent was fixed at 35 to 58.[36]

Opponents of immigration asserted that in proportion as the immigrant became an important factor in French economic and civil life, the country would be weakened economically and militaristically. For if the immigrants' motherlands mobilized their military forces or compelled the immigrants to return, the French economy would collapse in areas of high foreign concentration.[37] Immigrant-ridden frontier provinces would be less resistant to invasion. Immigrants returned to their mother countries would furnish military information with respect to France.[38]

It has been contended both that the foreign immigrants will outbreed the French and that the coming of the foreigners will depress French natality. The latter proposition, as developed by several French writers, is similar to but not identical with Francis Walker's theory that foreign immigration into the United States depressed American natality. Walker stressed the psychic response of Americans to the immigrants' coming.[39] The French writers assumed that there was always a quantity of "available employment," in response to which population grew through natural increase or immigration; and that growth from one source limited growth from the other. A. Bertillon formulated this proposition clearly in 1873.[40]

[35a] Martial, *Race*, p. 194.

[36] Concerning the history of anti-foreign agitation based chiefly upon economic grounds see Levasseur, III, 319-24, 400; M. Laumone, *Étrangers en France* (Paris, 1887); G. Lagneau, *A.s.m.p.*, CXXI (1884), 136-38; Pic, *op. cit.*, pp. 485-98; De Molinari, *J.R.S.S.*, L (1887), 189-94; *J.d.e.*, 5th ser., XV (1893), 424-25; Mauco, pp. 57-80, 475-80; G. Chandèze, *L'émigration et l'immigration*, pp. 117-55.

[37] Mauco recently observed (*I.L.R.*, XXVII, 1933, 782) that certain foreign countries have demanded very high wages for their nationals in the hope of saddling upon French industry charges high enough to reduce competition.

[38] Lagneau, *A.s.m.p.*, CXXI (1884), 135; Gonnard, *Essai sur l'émigration*, p. 318; also works of Bertillon and Leroy-Beaulieu. Recently the Minister of the Interior was empowered to fix the residence of foreigners, or to expel them; a special mobile police was established to watch foreigners.

> The greatest injury that this immigration causes us is to substitute itself for our natality. In France, in periods of prosperity, the calls for labor, which ought, according to the biology of collectives, to activate natality, activates immigration much more; the latter competes with the former; furnishing us fully with men, it prevents our feeling the stimulus of labor, and keeps us in our puny natality.

Lagneau admitted the possibility of the causal relationship here stressed by Bertillon, but questioned its applicability to France where natality was low prior to the coming of the immigrants and where parents restricted natality to assure easy occupations to their children, thus creating gaps in onerous occupations into which immigrants flowed.[41] Levasseur, who believed that both immigration and natality tended to increase in response to an upswing in the demand for labor, apparently did not believe that immigration would check natality.[42] Gonnard has several times rejected Bertillon's thesis on the ground that natality is low in many departments where there are few immigrants.[43]

Problems associated with assimilation and its effects have precipitated the greatest amount of discussion in the present century. Some have asserted that immigrants are economically and culturally inferior to the French[44] and difficult to assimilate; that the cultural and racial homogeneity of the French population will be destroyed by their coming.[45] Others believe that the immigrants can be assimilated culturally and biologically, at least if selected with care. Among the obstacles to assimilation are language barriers, strangeness of the French environment, the concentration of foreigners in small areas where one or several foreign nationalities predominate, the shortness of the period many foreigners spend in France, the resistance of foreign governments to the Frenchification of their nationals, and the objection on part of naturalizable foreigners to the military obligations of French citizens. These obstacles, while serious, are more than counterbalanced, according to Mauco, by factors favorable to assimilation: the ethnic similarity to the French of most of the immigrant groups; the tendency of families to immigrate; the patronal stabilization of immigration; the hospitality and fair and equal treatment accorded immigrants; the efforts of French educators to facilitate assimilation; the influence of the French Catholic clergy over the great numbers of Catholic immigrants.[46] In support of the view that foreigners are being assimilated, one may cite the growing number of naturalizations, the tendency of foreign natality levels to approach the French, the relatively large number of foreigners who marry French or other nationals, and the tendency of marriage to settle and stabilize the immigrant.[47]

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[39] See the writer's discussion of Walker's theory in *J.P.E.*, XLI (1933), 654-61.

[40] See article on "Migration" in *Dictionnaire encyclopédique des sciences médicales*, 2d ser., VII (1873), 661. See Cauderlier's views treated in Chapter VII.

[41] *A.s.m.p.*, CXXI (1884), 139.

[42] III, 226.

[43] *Essai sur . . . l'émigration*, pp. 323-24. One writer (G. M., *La natalité en France*, Paris, 1900) asserted that crossbreeding with immigrant stock would increase French fecundity.

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[44] E.g., R. Gonnard, *R.d.e.p.*, XVI (1902), 816-17. It has been charged, too, that immigrants are physically inferior to the French and more prone to become immoral, criminal, or pauperized. Actually, it is only among the least assimilated that criminality is greater. Much of the apparent physical inferiority is associated with the less favorable health and sanitary conditions found among the immigrants. See Mauco, pp. 482-92.

[45] See citations in Mauco, p. 59; De Molinari, *J.R.S.S.*, L (1887), 189; T. Loua, *J.R.S.S.*, XLVIII (1885), 667; F. Lepelletier, *R.S.* (May, 1926), p. 236; A. Pairault, *L'immigration organisé et l'emploi de la main-d'œuvre étrangere en France* (Paris, 1927), pp. 312-15; Huber (pp. 878-87) and authors cited by him.

[46] Mauco, pp. 487-92, 510-44; also Y. Guyot, *J.d.e.* (Nov., 1924), p. 389. As we showed in the preceding chapter, other writers have emphasized France's assimilative ability.

[47] For data on marriage see Martial, *Race*, and other works; Mauco, pp. 60, 532; *A.S.*

The French government has promoted assimilation up to the present chiefly by reducing naturalization requirements, such reductions being traceable to concern over France's slow rate of growth. Prior to the French Revolution, when the principle of *jus soli* was applied in France, the promise of naturalization was employed to stimulate immigration,[48] writers on population advocating both the facilitation of naturalization and the complete abolition of the *droit d'aubaine* which was finally suppressed in 1790.[49] During the early egalitarian period of the Revolution, foreigners were unfettered of their ancient disabilities, the Constituent Assembly declaring that in France all the peoples of the earth were free to enjoy the rights of humanity.[50] In practice, however, immigrants were not automatically naturalized or even invested with all the rights of French citizenship, for nationalistic feeling quickly supplanted cosmopolitan fervor. Under the Constitution of 1791 citizenship was extended to native-born children of foreign fathers established in France under the Kingdom and to descendants of French Protestant *émigrés.* Under the new civil code civil rights were accorded to foreigners authorized to establish domicile in France. The years of residence required of foreigners who wished to become citizens were fixed at five in 1791, reduced to one in 1793, and raised successively thereafter to ten in 1800. In 1809 it was provided that less than ten years might be required of foreigners rendering exceptional service to France. This last provision was removed in 1848 when the period was reduced to five years, only to be restored to ten when 2,500 naturalizations were granted in three months. In 1867 the residence requirement was reduced to three years after establishment of domicile in France, and to one year in case of exceptional service to the state. The number of naturalizations and acquisitions of domicile remained small, however, averaging respectively 197 and 332 per year in 1868-70, in contrast to 15 and 65 in 1851-66.

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[48] Mathorez, I, 138-50.

[49] Moheau, II, 113-15; Plumart de Danguel, *Remarques sur les avantages et les désavantages de la France et de la Gr. Bretagne* (Leyden, 1754), pp. 326-35.

[50] Already in 1614 one reads in the *Mercure de France:* "France is the common mother of all the world who refuses nourishment and increase to none" (cited by Martial, *Race*, p. 172).

In the post-1866 discussions of naturalization in the Senate and Chamber frequent reference was made (e.g., 1867, 1869, 1870) to the need either of imposing military obligations upon foreigners or of reducing the naturalization requirements in order that foreigners in France might more easily become French citizens and therefore subject to conscription. These observations were made again in the protracted discussion which preceded the enactment of the naturalization law of 1889. Under this law the formalities attendant upon naturalization were reduced, and children born in France of foreign parents born in and residing in France were declared naturalized upon the attainment of the age of twenty-one if then living in France; those born in France of foreign-born parents were eligible for naturalization at the age of twenty-one, provided they accepted the obligations of French citizenship. Under the military law passed in this same year, however, the names of persons born in France of foreign-born parents, or residing in France though born abroad, or naturalized, or possessing recovered citizenship, were inscribed on the conscription lists; and those who had their names removed from the lists became ineligible for French citizenship. The law of 1889 was further modified in 1893.[51]

While there was some complaint after 1889 that too many foreigners were being naturalized,[52] French writers interested in the promotion of French population growth advocated a further increase in naturalization.[53] This objective was not really achieved, however, until as a result of the reorganization and enlargement of the French Bureau of Naturalization in 1926 and the initiation of pro-naturalization propaganda—both moves attributable to concern over France's low rate of natural increase[54]—and the modification, in 1927, of the naturalization law,[55] naturalizations by law and decree increased markedly.

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[51] Concerning French naturalization measures see Levasseur, III, 400-04; Mauco, pp. 60, 520, 544-45; and debates in the Senate and Chamber in 1867, 1869, 1870, 1889, 1893.

[52] E.g., see *Annales du sénat* (March 10, 1893), I, 320-21.

[53] P. Leroy-Beaulieu advocated the annual naturalization of 50,000 to 100,000 aliens as a means of increasing France's population and reproductive power. See *J.R.S.S.*, LIV (1891), 384; see also Turquan, *op. cit.*, p. 157.

The annual number of naturalizations increased as a result of the law of 1889, rising from an annual level that often fell below 1,000 in 1867-89 to nearly 19,000 in 1890. Bunle estimates the number for 1851-86 at 51,000; that for 1886-1911 at 744,000.[56] Whereas about one million were naturalized in the pre-war period, about three-quarters of a million were naturalized in 1911-30. In 1931-36 naturalizations and reintegrations totaled 270,000; acquisitions of French nationality independently of court action, somewhat under 62,000.[57] The law of 1927 produced a great increase in the number of naturalizations, the annual average rising from 7,416 in 1923-26 to 24,157 in 1927-30; the number of persons acquiring French nationality (regardless of means) rose from an annual average of 28,241 in 1923-26 to 71,154 in 1927-30[58] and to over 60,000 in 1931-36.

The number of naturalized persons living in France aggregated 13,500 in 1851; 104,000 in 1886; 253,000 in 1911; 254,000 in 1921; 249,000 in 1926; 361,000 (of whom about 15 per cent had been born in France) in 1931. Naturalized persons comprised 0.04 per cent of the population in 1851, 0.28 in 1886; 0.66 in 1921, 0.88 in 1931. The number of naturalized approximated 0.4 per cent of the foreign population in 1851; 9.2 in 1886; 16.6 in 1921; 13.3 in 1931.[59]

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[54] *New York Times*, Oct. 11, 1926; G. Blondel, *R.S.* (Dec., 1925), p. 679.

[55] The law of 1927 naturalized all children of fathers born in France or naturalized there, children of French mothers, children of unknown parentage; naturalization was made optional for children born in France either of mothers born there or of foreign parents. The law of 1923 made naturalization accessible to certain foreigners who accepted the military obligations of their age class. The law of 1927 combines the principles of *jus soli* and *jus sanguinis*. See B. Akzin *et al.*, *La nationalité dans la science sociale* (Paris, 1933), especially Part II.

[56] Willcox, II, 220; also Levasseur, III, 403.

[57] *Bulletin*, S.G., XXVI (1937), 282. Pre-war naturalization estimates differ. Mauco (pp. 60, 554) fixes the number for 1872-90 at 304,000, about 200,000 of whom came to France from Alsace-Lorraine; the numbers for 1891-1910 and 1911-30 at 664,000 and 751,000, respectively. Sauvy estimates the number for 1872-1911 at 992,000, i.e., slightly above Mauco's estimate.

[58] *A.S.*, LI (1935), 51*.

[59] Census (1931), I, Part II, pp. 55, 65; Mauco, p. 60.

Although some writers continue to advocate heavy immigration and speedy naturalization as a source of security against Germany and in world politics,[60] contemporary French students of immigration express the common opinion that assimilation must proceed slowly and precede and conduce to naturalization; that only those who are physically and morally sound and ethnically similar to the French should be permitted to immigrate; that present unemployed but desirable immigrants and future immigrants must be distributed among French geographical districts and regions in such ways as will root them in French agriculture, industry, and cultural life.[61]

René Martial, who believes that France's racial plasticity has enabled her to preserve racial cohesion despite heavy immigration in the past, lays down a number of principles which must be observed if France is to retain her racial cohesion and cultural homogeneity in the face of contemporary immigration. First, immigrants should be selected only among those peoples whose history and whose psychological and biological characteristics (principally blood-grouping and chemical indices) assure their assimilation into and amalgamation with the French "race." In this acceptable category he places the Dutch, Walloons, Swiss, Arabs, Berbers, Poles, Czechoslovakians, Yugoslavs, and (assuming their willingness to give up Italian nationality) the Italians. Presumably Spaniards are also eligible. He suggests too the possibility of introducing some French-Canadian families into those parts of France whence they came and into North Africa for the purpose of reinvigorating the resident French population. Anglo-Saxons, Asiatics, and Negroes are least desirable. Second, only healthy members of acceptable peoples should be admitted. Third, preference should be given to families, not to individuals. Fourth, the number annually admitted should be small enough (say 80,000) to permit careful selection. Fifth, those admitted should be distributed widely enough to permit the schools, church, and other assimilative agencies to perform their task. Sixth, adequate numbers should be introduced into agriculture to prevent rural depopulation. Seventh, when unemployment develops in France, unemployed foreigners should be introduced into the French North African colonies to promote white growth there.[62]

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[60] E.g., P. Dominique, who in *La République* has advocated a population of 60-90 millions. See Associated Press report, Durham [N. C.] *Herald-Sun*, April 19, 1936.

[61] E.g., see Mauco, *I.L.R.*, XXXIII (1936), 192-93; Huber, pp. 878-87; Gonnard, *Essai . . . sur l'émigration*, pp. 328-31; C. Lambert, *La France et les étrangers* (Paris, 1928); A. Prost, *L'immigration en Franche-Comté* (Paris, 1929); Oualid, *R.d.e.p.*, XLII (1928), 1480; J. Bourdon, *Revue des sciences politiques* (April-June, 1927), pp. 273 ff.; A. Bouton, "La dépopulation dans la Sarthe," *Bulletin de la société d'agriculture, sciences, et arts de la Sarthe* (1929-30); also Pic, *R.d.e.p.*, XVI (1902), 494.

While Martial's contention that an integrated national immigration policy is necessary will probably be recognized in the form of governmental action,[63] it is unlikely that quality will be considered as important as Martial implies. With an impending deficit of births and a drying up of her immigrant supplies, France will be hard put to secure enough immigrants to stave off depopulation. For in view of present trends it is likely that she will have to compete to secure an additional five million migrants in the next two decades.

France's present immigrant supply is threatened by both nondemographic and demographic factors. The spread of industrialization, resistance to emigration, the efforts of countries like Italy to divert migrants to colonies and selected areas, and events like the war in Spain will operate in the future as in the past to prevent France from securing as many aliens as she desires. The decline of natural increase will serve both to dry up certain sources of immigration (Germany, Belgium, Switzerland, Czechoslovakia, Hungary) and to set up new competitors (Great Britain, Scandinavia, Germany, Belgium) for the shrinking supply of Southern and Eastern Europe, where annual natural increase still aggregates two millions. France's most likely future sources will be Poland with a growing excess rural population of some millions;[64] her most likely secondary sources are Yugoslavia and Portugal and possibly Spain. But in each of these countries she will have to compete with Germany, the Western Hemisphere, and probably some of the British commonwealths.[65]

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[62] See Martial, *A.s.m.p.*, 1er semestre (1933), pp. 113-41; 1er semestre (1934), pp. 393-433; *Mercure de France* (April 15, 1935), pp. 267-94; (Nov. 15, 1936), pp. 23-46; *Annales d'hygiène publique*, 2d ser., II (1924), 237-44; *La race française* (Paris, 1934), pp. 48, 239-40, 306-41; *Traité de l'immigration et de la greffe interraciale* (Paris, 1931).

[63] In 1935 a Centre d'études du problème des étrangers was established in France.

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[64] In 1930, according to Z. Ludkiewicz, Poland had an excess rural population of at least 700,000 families and a rural natural increase of 120,000 per year. This excess he believed susceptible of incorporation into agriculture in southwestern France. See *I.L.R.*, XXII (1930), 155-76. Recently C. de Kownacki estimated that even if Poland's undeveloped land were brought into use, her agricultural population would be too large by seven millions. See *J.d.e.* (March-April, 1936), pp. 156, 160. Present Polish anti-Semitism and efforts to compel the Jews to emigrate are attributable in large part to this population pressure. See O. D. Tolischus, *New York Times,* I (Feb. 7, 1937), 38.

[65] On checks to France's immigrant supply see Chapter I; also Mauco, pp. 470-74, 494-501; *I.L.R.*, XXVII (1933), 783-88; A. Oblath, *I.L.R.*, XXIII (1931), 804-34.

CHAPTER X

MEASURES TO PROMOTE NATURAL INCREASE

In the two preceding chapters we have described ways in which French colonial and immigration policies have been adjusted to the domestic population problem. In this chapter we shall describe measures proposed or effected to check the decline in the rate of natural increase—chiefly measures to stimulate natality. While major attention will be devoted to post-1880 measures, some attention will be given to pre-1800 measures which often resembled post-1880 measures and which were always inspired by the belief that population was growing too slowly. The effectiveness of the measures will be appraised.

French publicists and statesmen favored the stimulation of population growth at least as early as the sixteenth century, Bodin among others praising the laws enacted in ancient Rome to promote marriage and fertility. Moreover, as we have already indicated, both statesmen and publicists favored the fostering of immigration and the curbing of emigration throughout the period 1500-1789. Appropriate measures occasionally were put into effect.

No careful and complete discussion of means to stimulate population growth in France seems to have antedated two memoirs prepared by Colbert's counsellors in the middle 1660's, in which it was stated: (a) that never in the past in France had special favors been accorded by the crown to fathers with several or more children; (b) that both marriage and fertility might be increased by exempting married persons and parents of children from certain taxes and state-imposed burdens, by increasing the number and weight of such burdens incident upon the unmarried and the childless, and by granting special honors (e.g., knighthoods to the nobility and patents of nobility to the bourgeoisie; higher rankings in public assemblies) to married persons with a specified number of children. Nor did any

French statesman under the old regime devote to the stimulation of population growth a fraction of the attention given thereto by Colbert, a thoroughgoing totalitarian who apparently believed the individual to be but the duty-ridden instrument of the state.

Colbert endeavored to stimulate population growth in various ways. First, he forbade emigration (finally under pain of death in 1681) and sought to recruit immigrants. Second, he constantly reminded colonial governors of their duty to stimulate population growth, sent many boatloads of girls to the colonies and required the colonial soldiers to marry them. Third, in 1664-65, he drew up a measure designed: (a) to limit the number of religious celibates and the amount of property which religious institutions might own; (b) to defer to the ages of 25 and 20 years the taking of final religious vows by males and females. Clerical pressure prevented the effectuation of this measure. Fourth, in 1665, he tried to regulate doweries so that a father could satisfy the demands of potential husbands, no matter how many daughters he had. Fifth, in 1666, he put into effect the famous decree associated with his name (a decree inspired in part by the Roman laws and by a Burgundian practice dating back to the Hundred Years' War)—a decree providing: (a) exemption from certain taxes until the age 24-25 of taxable subjects marrying before the ages 21-20; (b) exemption for life from all taxes and burdens to fathers of 10 legitimate children, not in religious service, and living or killed in the king's service; (c) pensions of 2,000 and 1,000 livres per year to Catholic nobles with 12 or more and 10-11 legitimate children, respectively, living or killed in the king's service, and not in the church service; (d) pensions half as great as in (c) for bourgeoisie meeting the same conditions. In 1667 pensions were extended to all subjects without distinction. In 1669 the financial aids were made partly applicable in Canada.

Colbert's measures seem to have exercised little influence upon fertility. Very few families could qualify for the pensions. Moreover, as a result of failure to administer the edict of 1666 as Colbert intended, this edict was revoked in 1683, the revocation ending the only substantial and general effort under the *ancien régime* to stimulate population growth.[1] In fact, during the remaining years of the reign of Louis XIV, Colbert's principles were reversed, the marriage of soldiers being penalized and marriages in general being taxed at times. Proposals to restore Colbert's laws were ignored by the crown.[2] At most, occasional pensions were given noble fathers of 10 children; occasional tax exemptions, to fathers of 10 living children. At times married persons were exempted from militia service. Tax exemption was sometimes granted to ex-soldiers who occupied uncultivated land. A few marriage portions were provided in the eighteenth century upon the birth of a son to the king and upon other occasions. On the whole, however, marriage seems to have been in less repute, and its frequency seems to have declined in the eighteenth century. In 1768, despite a decrease in the number of religious celibates from about 270,000 under Colbert to about 200,000, the number of monasteries was limited by government edict, and the age for final vows was raised to 25 for men and 18 for women.[3]

With the development and spread in the middle of the eighteenth century of the belief that France was undergoing depopulation, many and varied measures designed to stimulate marriage and fertility within marriage were advocated by many writers.[4] Some of these proposals were broad and general in nature: reform the *mœurs;* stimulate industry and agriculture;

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[1] On Colbert and his measures see Schöne, chap. ix, p. 261; G. H. Hecht, *Colbert's Bevölkerungs- und Gewerbepolitik* (Tübingen, 1898); P. Clément, *Lettres, instructions, et mémoires de Colbert* (Paris, 1861-70), and *Histoire de Colbert* (Paris, 1892). See also Des Cilleuls, *La population*, pp. 62-63; J. Bertillon, *La dépopulation*, pp. 259-60; E. F. Hecksher, *Mercantilism* (London, 1935), I, 347-48, II, 160-69, 300-01.

[2] Schöne, pp. 171, 178-79, 267, 271.

[3] On these measures see Mathorez, I, 43-53, 88-89; Schöne, pp. 153-54, 210-13; Levasseur, I, 200-201; *Journal de commerce* (Brussels), V (Oct., 1760), 46-47.

[4] The most complete discussions are found in A. Goudar, *op. cit.*, I, 255-430; Goyon de la Plombaine, *op. cit.*, I, 61-65, II, 21-28, 86-174, 204-29; Jaubert, *op. cit.*, especially pp. 38-58, 119-24, 153-91, 266-78; Moheau, II, 85-90, 99-101, 116-20, 150-54; Plumart de Danguel, *op. cit.*, pp. 323-40; J. Faiguet de Villeneuve, *Mémoire*, pp. 9-10, 19, 25-28, 48-61, 89-115; *L'ami des pauvres* (Paris, 1766), pp. 3-14, 118-52, 169-71. Many others shared the views of the writers named.

establish freedom of commerce; forbid the exportation of grain; make the tax burden lighter and more equitable; increase the taxes on luxuries; reduce unemployment; reform the French hospital system; improve urban public health; prevent overcrowding of professions such as the liberal; check rural depopulation and prevent too much urban growth. Primogeniture and the practice of granting large marriage portions were widely condemned. All but the most devout favored a limitation of the number of ecclesiastical celibates and an advancement of the minimum age at which final vows could be taken. The widespread use of domestics, said to comprise 7 to 11 per cent of the active population, was condemned. Divorce was described as favorable to propagation by Montesquieu and De Villeneuve; free unions, by the Marquis d'Argenson; five-year marriages, to be terminated if sterile, by Maurice of Saxe.[5]

Many measures specifically designed to penalize celibates and the childless and to reward the married and parents of families were proposed by French publicists. These measures included proposals: (a) to impose heavier tax, military, and other state burdens upon celibates than upon the married, and upon the childless than upon the parents of children; (b) to confer higher social rank and public honors upon progenitors of designated numbers of children; (c) to grant *maîtrises* gratuitously or chiefly to the married; (d) to abolish all superfluous church expenses entailed by marriage; (e) to tax employers of domestics, said tax to be higher if the domestic were strong, or unmarried, and to progress geometrically with the number of domestics employed; (f) to prohibit abandonment of agriculture for employment as an urban domestic; (g) to provide military training in ways least prejudicial to marriage, and to grant soldiers additional pay for the support of a wife and each child; (h) to legalize divorce, thus enabling to marry those who loved one another and desired to procreate; (i) to mobilize public employment and public funds in ways designed to facilitate marriage; (j) to deny to the unmarried the right to vote, serve in parliament, or hold better public jobs not requiring unusual or military talent; (k) to use funds employed for public fetes and allegedly useless purposes to provide the needy with marriage portions; (l) to pay peasants to raise foundlings, the latter to be dowered by the government; (m) to employ inefficiently used public funds to grant annual pensions to noblemen (100 livres for daughters, 300 for sons in king's service), to bourgeois (200 livres for sons in the king's service), and to the poor (40-60 livres for each child beyond the second); (n) to restrict the rights of inheritance, denying to celibates over 25 all rights to gifts and the property of collaterals and all but a small right in patrimonial property, and to childless widows or widowers all rights in property of mate; (o) to deny professorships, academy memberships, etc., to celibates; (p) to honor and free of part of their taxes cities with good records in respect to marriage and procreation.

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[5] Maurice of Saxe believed that periodical changing of mates would stimulate sexual desire, a view common even today (E. Westermarck, *The Future of Marriage in Western Civilisation*, New York, 1936, pp. 54-57).

Opinion, during the Revolutionary period, was colored by the thinking of those who prior to 1789 had condemned depopulation and advocated measures such as we have enumerated. In general, it was believed that although a system of political liberty would be favorable to population growth, control of the *mœurs* and measures designed to restore simplicity were necessary to prevent rural depopulation and to facilitate population growth. The measures introduced in the legislative assembly included proposals to tax luxuries, celibates, and domestics discriminatively; to establish sumptuary regulations; to prescribe special costumes for fathers and celibates; to grant honorific and pecuniary advantages to fathers of families; to require soldiers to marry. In the year IV a petition to the Convention even demanded that celibacy be made a capital crime. Two years later polygamy was advocated as a population-stimulating measure. Celibacy was severely condemned, too, by contemporary publicists. Poncet de la Grave proposed dividing society into five classes ranging from celibates to parents of ten or more children; denying to celibates the right to hold public offices and jobs or to receive or alienate property; requiring celibates to pay double taxes and wear a special headdress. M. de Montyon advocated higher taxes on luxuries and on domestics and celibates, saying that the latter were the source of immorality. M. Robert advocated special burdens and ridicule-inspiring costumes for celibates and proposed improving the species by requiring all soldiers to marry.[6]

Out of these proposals there came little legislation. In the closing decade of the century tax-exemptions, invalid relief, indigent relief, exemptions from military burdens, and educational allowances were based in part on family size. Divorce was permitted under the law of 1792, allowed with restriction in the Code of 1804, suppressed in 1816, not to be legalized again until 1884. By decree (1791) celibates were required to pay a higher habitation tax than the married; fathers of three children, a lower tax; under a later law (year III) celibates aged over 30 were required to pay a contribution one-fourth higher than the married. Celibates had their property valued more highly than non-celibates under the law of 1793 sanctioning forced borrowing. Celibates were excluded from the Conseil des Anciens. By decree (1793) the right of celibates to succor in case of misfortune was reduced. By decree (year III) special taxes were imposed upon luxuries, and a geometrically progressive tax upon male domestics (modified later). The law of 1793, under which illegitimate children enjoyed most of the rights of legitimate children, was completely negatived when *recherche de la paternité* was interdicted under the Napoleonic Code, not to be restored (in large part) until 1912.[7] The law of 1793, whereunder unmarried mothers were to be recompensed, proved ineffective.[8] In the Seine in the early 1790's preference with respect to public employment was given fathers. Soldiers were permitted to marry without the consent of superiors under a measure of 1793, repealed in 1808. Under the law of 1795 naval conscription affected celibates first, fathers of children last. This law was finally suppressed in 1835 because it allegedly provoked premature marriage. In the year XIII a measure granting free education to one child of the father of seven male children was confirmed. A decree of 1806 provided that the sixth child of poor families be raised at state expense. Married males were less liable to conscription even under Napoleon, who also provided 6,000 doweries in 1810 for soldiers agreeing to marry.[9]

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[6] On these points see Schöne, *op. cit.*, pp. 220-38; P. de la Grave, *Considérations sur le célibat* (Paris, 1800); M. Robert, *De l'influence de la révolution sur la population* (Paris, 1802); M. de Montyon, *Influence des impôts sur la moralité des peuples* (Paris, 1808).

[7] See C. Brinton's thorough *French Revolutionary Legislation on Illegitimacy 1789-1804* (Cambridge, 1936).

[8] Lallemand, *Histoire des enfants*, p. 690.

During the first two-thirds of the nineteenth century, as we saw in Chapter V, no interest was manifested in pro-populationist legislation. For this distinterest several factors were responsible. During and after the Napoleonic era power passed into the hands of the bourgeoisie with whose scale of values *étatism*, populationism, and state responsibility for the support of the needy were not consonant. Eighteenth-century ideals, however attractive in the abstract, proved difficult to translate into practice. Malthusianism, explicit in many eighteenth-century French works antedating Malthus, gradually won widespread acceptance, in part because of the ascendancy of bourgeois values and because poverty and population pressure were believed to be widespread. Malthusianism implied, on the one hand, that there would always be at least a sufficient if not too great a population; on the other, that numbers could be increased only in proportion as opportunities for employment and means of existence were made available—a belief not rejected until the formulation after 1860 of a psychologico-cultural theory of population growth. Already in 1791 the Comité de mendicité, noting how in England the poor law apparently had helped to augment the number of poor, rejected the proposal to raise poor relief through taxation, and indicated that escape from poverty lay not in laws conducive to population growth, but in laws favorable to the stimulation of employment. Wherefore the commonly held late eighteenth-century belief that the state was obligated to succor the needy was not embodied in early nineteenth-century legislation.[10] Analogous forces contributed to the gradual suppression of governmental aid to foundlings. The law of 1793, requiring the establishment in each district of a delivery home for unmarried mothers, was never enforced. In 1811 *tours* were established by decree in all hospices, despite the growing belief in 1790-1810 that government aid to foundlings encouraged mothers to abandon children. After 1825, however, *tours* (i.e., depositories for foundlings) began to be suppressed on the ground that they contributed to the abandonment of children and to sexual license. Only five remained open in 1869; none in 1889.[11] The Malthusian character of mid-nineteenth century bourgeois opinion is reflected in the fact that the establishment of *crèches* (about 1842) and the practice of vaccination (1848) were looked upon as possible sources of population pressure.[12]

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[9] Levasseur, III, 210, 215; Schöne, pp. 211, 235-44; G. Dequidt, *Le statut des familles nombreuses* (Paris, 1922), pp. 2-4.

With the "discovery," after 1850, that population was growing very slowly in France, proposals to stimulate population growth again began to be made. These proposals fall into four classes: (1) those designed to reduce the net cost to parents of procreating and rearing children; (2) those designed to create a more favorable social, political, and economic milieu for members of a family including at least a designated minimum number of children, and a less favorable milieu for the infertile; (3) those designed to alter the social values of the French population and render the French people more disposed to family life and procreation; (4) those which do not fall into categories (1) to (3). In group (1) may be placed proposals to grant bonuses at the birth of each child beyond the second or third; to provide family allowances for each child above a designated number; to base wages upon family size; to reduce the tax burden of families of designated size (e.g., through lower inheritance and income tax rates for parents of large families; through reductions of taxes and tariff duties heavily incident upon goods included in the ordinary household budget); to provide lodging for large families and to cheapen such lodging; to reduce the rates per person charged large families by railroads, state institutions, etc.; to adjust payments under pension, social insurance, and compensation systems to family size; to grant parents various pecuniary aids (e.g., milk and hospitalization allowances, medical care, etc.); to give money prizes to parents of families of designated size, quality, and condition; to admit children into industry at an early age. In group (2) fall proposals to reserve various types of governmental jobs for parents and children of families including three or more children; to reduce the military burdens of members of larger families and increase those of members of smaller families;[13] to increase the tax and fiscal burdens of celibates and of childless and small families; to increase the voting strength of heads of large families; to adjust political representation more closely to population and population changes; to establish a national lottery for large families, giving one or more tickets to families of designated size.

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[10] On some of these points see Schöne, pp. 246-47, 297-98; C. Block, *L'assistance . . .* , pp. 142-56, 211-14, 375-76, 433-39; F. Dreyfus, *La Rochefoucald-Liancourt* (Paris, 1903), chap. iv.

[11] Levasseur, II, 61-63, III, 129; Lallemand, *Histoire des enfants*, pp. 270-79, and pp. 666-708, for later controversy.

[12] Schöne, pp. 336, 339.

In group (3) fall proposals to modify the inheritance law; to grant parents of large families public recognition in the form of medals, etc., and thus increase the esteem in which members of such families are held; to strengthen the patriotic, familial, collectivistic, and religious sentiments of the population; to carry on a constant propaganda in favor of natality and population growth;[14] to repress all propaganda, literature, spectacles, movements (e.g., the nudist), etc., allegedly conducive to birth control and abortion; to declare voluntary abortion a crime against the nation; to raise the age of consent; to make fathers responsible for the support of illegitimate children; to reduce legal and fiscal obstacles to marriage; to introduce military training in the secondary schools in order that most of it might be acquired before adulthood when military service involves deferment of marriage.

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[13] Proponents of this view did not generally favor diminishing the size of the army or weakening the national defense, however. In 1922 the Paris *Matin* (March 29, 1922) carried a statement that it was more important to increase natality than to maintain a large army.

[14] R. Lavolée advocated the use of every village school for propaganda to improve morals. (See *Les fléaux nationaux*, Paris, 1900). P. Haury has written a book, *Pour que la France vive: éléments d'un enseignement nataliste et famial* (Paris, 1927), designed to inform students in secondary schools of the ill effects upon nation and individual of low natality and the very small family system, and to inculcate in students attitudes favorable to natality and to pro-natality measures. Illustrated leaflets, pamphlets, and even films are being employed by the Alliance nationale. Other organizations carry on similar propaganda. Even politicians play a part. Thus in 1922 the French minister of agriculture, upon being presented to a mother of fourteen children, removed the departmental prefect's Croix du Mérite and

In group (4) fall measures to modify the law pertaining to divorce;[15] to protect the jobs and incomes of women before and after delivery; to encourage breastfeeding; to reduce mortality among mothers and children, legitimate and illegitimate; to check the consumption of alcohol; to require Catholic priests to marry;[16] to conscript in war times for full-time service in industry all childless women 30 and over, and for part-time service mothers of less than three children;[17] to permit polygamy; to establish an obligatory maternal service analogous to the military, and/or a corps of voluntary reproducers who will be accorded official honor and recompense; to decentralize France

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placed it on the mother (*J.d.e.*, 6th ser., LXXIII, 1922, 116). In 1924 President Doumergue sent a personal representative with a gift to a road workman's wife who had just borne quadruplets (*Chicago Tribune* Foreign News Service, July 2, 1924). In 1935 the government of Paris offered eight doweries to working girls to encourage marriage (United Press, Feb. 17, 1935).

[15] Prior to the re-establishment of divorce in 1884 it was suggested that the authorization of divorce would favor natality by enabling the marriage of those who were in love or members of sterile unions. Now, however, it is often asserted that the restriction or abolition of divorce will favor natality (e.g., F. Lepelletier, *R.S.*, March, 1924, pp. 190-91). In 1909-13 the French divorce rate, which had risen steadily after 1884 (the frequency of separations rose steadily in 1840-84), was exceeded only by the American. After 1914 rates in other countries rose, often to levels above the French rate which continued to rise. In France approximately three-fifths of the divorced couples are childless; between one-fifth and one-fourth have one child. The frequency of divorce is notably higher when one or both parties are French. Inasmuch as the divorced couples are so predominantly childless and inasmuch as a considerable proportion remarry, it is difficult to understand why pro-natality propagandists believe that the restriction of the right to divorce can elevate natality. For statistics, etc., on divorce see Levasseur, II, 89, 99-100; Westermarck, *op. cit.*, III, 339-41; Huber, pp. 43-45, 245, 634, 651-60; French and international rates in *A.S.*

[16] Advocated by the director of Solidarité sacerdotal, a society of ex-priests (*New York Times*, Nov. 26, 1922).

[17] *Literary Digest* (Nov. 15, 1919), p. 27.

politically and thus stimulate private initiative;[18] to avert offensive wars; to promote marriage among the indigent by granting them agricultural credit and the right to the usufruct of pieces of land, said pieces to be cut out of unoccupied pasture lands and large unproductive properties; to improve the public health service.[19]

The proposals did not assume such varied form until after the Franco-Prussian War. At first, stress was placed upon increasing the efficiency with which resources and children were used, for Malthus's basic principle continued to be accepted.[20] Increased military requirements were pointed to as a cause of late marriage.[21] The common use of mercenary wet nurses was described as a cause of high infant mortality and of the restriction of natality among rural women. Legoyt estimated at 250,000 (i.e., one birth in four) the number of children turned over to mercenary nurses who received on an average 20 francs per month.[22] The advisability of reopening the *tours* and thereby checking infanticide and infant mortality, raised at first on grounds unconnected with the population question,[23] was subsequently defended on the ground that population growth would be stimulated.[24] Nothing of consequence was done, however.[25] After much deliberation the Academy of Medicine expressed the opinion in 1917 that French mores and institutions needed to be modified so that motherhood would not be a source of dishonor under any circumstances. The Academy of Medicine recommended the establishment in all departments of maternity homes or asylums where mothers, whether married or not, could go for delivery and, if necessary, abandon children for whom they could not provide. The Academy recommended,

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[18] E. Thirion, *La dépopulation enrayée par la décentralisation* (Paris, 1904); also Naudeau, *op. cit.*, p. 459. Thirion criticized measures singling out large families for special favors.

[19] Many of these last mentioned measures are described by R. Gonnard (*Dépopulation*, chap. iv); means of dovetailing agriculture and gardening with industry, by A. Krug (*Pour la repopulation et contre la vie chère*, Nancy, 1918). For representative treatments of the enumerated measures see *A.s.m.p.*, CXXIV (1885), 808-38, CLX (1903), 137-248; *Bulletin*, 2d ser., XIV (1885), 148-51, 187-88, 284-89, 349-65, XXIV (1890), 93-135, 357-62, LXXVII (1917), 634, LXXVIII (1917), especially pp. 454-56; J. Bertillon, *La dépopulation*, also *R.p. et p.* (June, 1897), pp. 531-74; B. Roussy, *Education domestique de la France et rénovation sociale* (Paris, 1914); M. T. Nisot, *La question eugénique* (Brussels, 1927), I; Leroy-Beaulieu, *La question;* L. Boucoiran, *La famille nombreuse dans l'histoire et de nos jours* (Paris, 1921), especially pp. 65-116, 493-545; C. Colson, *R.d.d.m.* (April 15, 1915), pp. 840-75; files of *Réforme sociale* and *Revue de l'alliance nationale pour l'accroissement de la population française;* L. Naudeau, *La France se regarde* (Paris, 1931), pp. 445-66. See also *R.p. et p.*, LXXVII (1913), 59-80, XCIV (1918), 270-98; *L'économiste français* (Dec. 30, 1922), pp. 833-35; *North American Review*, CCX (1919), 766 ff.; *Current History*, XIX (1923-24), 414-15; J. Jung, *Des moyens . . . proposés;* R. de Felice, *Naissances en France*; E. Piot, *La dépopulation* (Paris, 1902); V. Turquan, *Contribution, etc.*, and *La dépopulation française* (1916). Typical propagandistic pro-natality works are: Paul Haury's 50,000 fr. prize-winning *La vie ou la mort de la France* (Paris, 1923); M. Eble, *Une politique sociale* (Paris, 1924); G. Cottier, *Des bébés, s'il vous plaît* (Paris, 1923), designed to show that pregnancy is not harmful to health or social position; Mme. Aurelier Mortier, *Une politique de la maternité* (Paris, 1923); F. Appy, *Pour la France. Sa repopulation et son relèvement* (Nice, 1899). On public hygiene see A. Landry, *L'hygiène publique en France* (Paris, 1930).

[20] As late as 1917 M. Galeot (*L'avenir de la race*, Paris, 1917) reasoned that since parents had children only when the latter were a source of income, the state should everywhere establish "factory" schools to accelerate the process of making children economically productive.

[21] A. Legoyt, *J.d.e.*, 3d ser., VII (1867), 218.

[22] *Ibid.*, p. 218.

[23] On this controversy see Schöne, p. 346; *J.d.e.*, 1st ser., XIII (1846), 51-72, XXXIII (1852), 368-71; 2d ser., XI (1856), 252-61; 3d ser., LXVIII (1877), 133 ff. Malthusians alleged that reopening of the tours would increase illegitimacy but not check abortion and infanticide.

[24] See M. Marjolin, *Mémoire sur la necessité du retablissement des tours* (Paris, 1878); Lumier, *Bulletin*, 2d ser., XIV (1885), 148; F. Boschet, *La protection de l'enfance dans les temps anciennes et de nos jours* (Toulouse, 1914), pp. 33-34. In 1901 Dr. Paul Strauss, critic of Malthus and of the view that welfare measures caused dysgenic selection (*Assistance sociale. Pauvres et mendiants*, Paris, 1901) advocated the establishment of various institutions to aid mothers (e.g., secret maternity asylums, day nurseries, arrangements for maternal aid and instruction) and of the requirement that all mothers of children under one year be compelled each three months to secure a doctor's certificate testifying that the child was properly cared for (*Dépopulation et puériculture*, Paris, 1901). Dr. S. de Planzoles, advocate of anticonceptional prophylaxis when indicated by the heredity, health, or economic condition of the female, expressed views similar to those of Strauss. See *La fonction sexuelle* (Paris, 1908); *La maternité et la défense nationale contre la dépopulation* (1909). See also for similar views L. Roudergues, *Une semaine d'hygiène sociale à Dunkerque* (1909); G. Andre, *De la dépopulation* (1910); H. de Rothschild, *Dépopulation et protection de première enfance* (1901); F. Doucournau, *Des moyens de combattre la dépopulation* (1900); J. Guillemin, *De la protection des enfants du premier âge* (1901); B. Roussy, *op. cit.*, Parts II-III.

[25] In 1869 a law was passed to grant temporary succor to the needy mother of an illegitimate child who consented to rear the child. In 1893 indigent mothers were allowed the care of a physician at the time of delivery. See L. Bernard, *La défense de la santé publique pendant la guerre* (Paris, 1930), pp. 289-90.

further, that when the mother desired, her pregnancy and delivery were to be kept secret.[26] As yet the mores have not been so modified. The proposal, made in the French Senate as early as 1878, that *recherche de la paternité* be permitted in order to stimulate population growth was not realized in large part until 1912. A stronger bastardy law is still being demanded.[27]

Measures to reduce child mortality were the first to receive continuous attention. In 1866 the Société protectrice de l'enfance de Paris was formed to promote child care and secure passage of a law designed to control the "nursing industry,"[28] then taking a large toll.[29] As a result, the famous Loi Roussel, which provided for governmental registration of, and surveillance over, children under two placed with mercenary nurses, became a law in 1874 after having been proposed in part in 1869 as a check to the decline in natural increase.[30] Since the Franco-Prussian War interest in child and maternal welfare has led to the adoption of many measures designed to regulate child labor, improve the health of mothers and children (particularly the needy), extend primary education, provide aid and suckling bonuses for pregnant women, and so on. Through public and private efforts free medical attendance and advice for expectant mothers, infant consultation, medical inspection, suckling rooms, milk depots, etc., have been provided. Since 1922 the activity of private organizations interested in child welfare has been coordinated by a national child committee.[31]

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[26] *Bulletin*, 2d ser., CXXVIII (1917), 441-56. In 1924 a law providing for the establishment of such asylums was introduced in the Senate (Nisot, *op. cit.*, p. 454).

[27] *J.d.e.*, 4th ser., V (1879), 32-42; L. Naudeau, *La France . . .* , p. 463. E. de Girardin in 1859 proposed equal rights for legitimate and illegitimate children that maternity might become woman's peculiar virtue (*La liberté dans de mariage*, Paris, 1859, pp. 44, 71).

[28] Private organizations interested in child welfare had long been somewhat active. Established in 1788, the semi-official Société de charité maternelle, consisting at first largely of noble women, sought to aid Parisian mothers of legitimate children, prevent child abandonment, and encourage breastfeeding. Needy mothers were provided with a layette and a small monthly allowance for two years if necessary. See Block, *op. cit.*, pp. 357-58, 448; *J.d.e.*, 1st ser., X (1845), 266. Day nurseries, numbering 400 by 1902, were first established in France in the 1840's. See E. Chevalier, "Enfance," *Nouveau dictionnaire d'économie politique* (Paris, 1900), I, 813-23; H. T. Ashby, *Infant Mortality* (New York, 1915), pp. 146-47; also *R.d.e.p.*, XXIII (1909). In at least one community a local baby-saving campaign greatly reduced infant mortality (*Encyclopaedia of the Social Sciences*, III, 380-81).

[29] In 1850-70 in some places 70-80 per cent of children placed out with mercenary nurses died in the first year (E. Chevalier, *op. cit.*, pp. 815-16). About 1870 the corresponding percentage in representative areas approximated 35; that among children suckled by their mothers, 20 (*A.s.m.p.*, LXXXVII, 1869, 45-49; XCIII, 1870, 216-26). See also Le Fort, *R.d.d.m.* (March 15, 1870), pp. 372, 380 ff.

[30] Lallemand, *Histoire des enfants*, pp. 331-35.

Success has attended these efforts, infant mortality declining from 178 in 1861-70 to 124 in 1911-13 and 69 in 1935. The mortality of infants of 10-365 days age protected under the Loi Roussel fell from 234 in 1898 to 138 in 1913 to 77 in 1932; the comparable rate in the population at large, 148 to 83 to 59.[32] For the decline after 1890 the spread of the practice of pasteurizing milk was responsible in part. The practice of placing children with mercenary wet nurses—a practice relatively most common among mothers with low and uncertain incomes—diminished, falling to 10 per cent by 1913, to about 7 per cent in the middle 1920's, and to less than 5 since 1930.[33] Despite the renewal, after 1880, of agitation for breastfeeding, the proportion so fed of the new-born placed with mercenary nurses merely remained constant at 36-38 per cent in 1896-1913, thereafter falling to 17 per cent in 1920 and to a much lower level since.[34] For this decline the increased success with artificial feeding must have been responsible in large part. Breastfeeding in the population at large apparently increased after 1916, judging from the number of mothers receiving suckling bonuses. For by 1917, 33 per cent of all mothers were receiving these bonuses; the figure had been 7 in 1914; it did not rise above 37 in the 1920's.[35] Since the early 1920's an increasing relative number of mothers apparently have suckled their children, presumably because of the various pecuniary rewards and propaganda described below.

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[31] On these various measures see Bernard, *op. cit.*, pp. 290-325; Nisot, *op. cit.*, pp. 452-54; Ashby, *op. cit.*, pp. 114, 145 ff.; *American Journal of Sociology*, XI (1905-06), 170 ff.; *International Yearbook of Child Care and Protection* (London); also *New York Times*, Dec. 18, 1922, London *Times*, Aug. 12, 25, 1925.

[32] *A.S.*, LI (1935), 41*. See also Huber, pp. 303-07, 748-50. The law was not always well enforced, at least prior to 1890 (*Bulletin*, 2d ser., XIV, 1885, 149-50; XXIV, 1890, 333).

[33] *A.S.*, LI, 41*; Huber, pp. 305, 748. In Paris after the war about one-fifth of the new-born were placed with mercenary wet nurses; less than 10 per cent of these were suckled. In 1862-66 about 37 per cent of Paris new-born were placed with nurses (*A.s.m.p.*, XCIII, 1870, 216); in 1886-87, 11 per cent were placed with nurses, 18 were fed by bottle or artificially. Two-thirds of all infants dying of gastro-interitis were bottle-fed. See A. Lagneau, *Bulletin*, 2d ser., XXIV (1890), 69.

[34] F. Ledé, *J.S.S.P.* (Dec., 1922), pp. 292 ff.; see also Huber, pp. 304-05. Breastfeeding was frequently advocated in plays, stories, and novels after 1885, after not having been mentioned by French literary men in the preceding three-quarters of a century. See Scheifley, *Brieux* . . . , pp. 366-67.

As the Malthusian theory gave way to a psychologico-cultural theory after 1860, and as the French rate of natural increase continued to fall after 1875, more and more measures to stimulate natality were described in books and journals and introduced in the legislature. Many of these measures closely resembled those proposed prior to 1800.[36] Between 1875 and the middle nineties publicists and others advocated: authorization of *recherche de la paternité;* taxes on celibates for the support of illegitimate children; establishment of asylums for needy pregnant women; depriving celibates and childless couples of the right to bequeath property to persons other than the state or collaterals with five or more children; granting the state one-third or two-thirds of the heritage when children number only two or one; according to surviving spouse with three or more children usufruct of one-fifth of property of decedent; some community support for needy children; reduction of military service in general, or at least for members of large families, and location of training centers in healthful rural areas; reduction of apprenticeship requirements and other obstacles to entry into various occupations; reduction of legal formalities prerequisite to marriage; bounties or tax exemptions to parents of three or more children; establishment of a system of insurance for girls whereunder each would later receive a sum of money for each child placed in the world or reared; tax on celibates, the proceeds to provide pensions of 100 francs for each child aged under 15 and beyond the third; annual rentes[37] of 50 or more francs for a limited number of years for each child beyond the fifth. The measures introduced in the French legislature in 1878-95 but not adopted provided: that every Frenchman (not a clergyman or infirm) aged 26-40 years be deprived of all electoral rights until he had contracted marriage; that legal obstacles to marriage be reduced; that divorce be authorized; that the state educate one child in each family of six or more; that the income tax of heads of families of five or more be reduced one-fourth; that all new-born be vaccinated (adopted in 1902); that medals be issued to parents of large families; that communes be obliged to assist unmarried mothers who agreed to raise their children; that employers of mothers with young children provide nursery care for them; that registration fees paid by celibates be doubled; that ecclesiastical leaders (i.e., bishops) be prevented from enforcing vows of perpetual celibacy and chastity; that birth bounties be granted parents. But two measures were adopted even temporarily: (a) raising at state expense in a secondary school one child in families of seven children (abandoned almost immediately after adoption in 1884 because of expense involved); (b) exemption from *contribution personelle mobilière* to parents of seven living children (virtually abandoned because of faulty administration and expense a year after enactment in 1889).[38]

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[35] M. Lesage et M. Moine, *Étude générale de la mortalité de l'enfant de première année* (Paris, 1930), II, 4.

[36] Some of the resemblances are self-evident. In 1912 one large family league advocated re-enactment of a law of 1805, once re-enacted in 1884, whereunder the state agreed to raise one child in families of seven (Leroy-Beaulieu, *La question*, p. 463, note). Bertillon (*Dépopulation*, p. 274) advocated a habitation tax similar to that proposed by Condorcet in 1790 and decreed in 1791 (cf. Schöne, pp. 227-29).

Although proposals such as have been enumerated were described as ineffectual, socialistic, and subversive of the system of individual liberty,[39] rounded pro-natality programs were evolved. These programs were explicitly or implicitly based upon the assumption that each individual citizen was duty-bound to perpetuate his country, even as he was duty-bound to defend it and contribute to the support of its government. Whence it followed that he who shirked the first duty needed to bear more than his normal share of the defense and support of the state. *Salus populi, suprema lex esto.* Inasmuch as all the principles and measures proposed and/or put into effect in the last thirty years were described and advocated in 1890-1913 by J. Bertillon and Paul Leroy-Beaulieu, each of whom believed that the "normal" French family must include at least three living children, the proposals of these two men will be summarized.[40]

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[37] This proposal, made by C. Richet (*R.d.d.m.*, June 1, 1882, p. 614), resembles one made by the Abbé Pichon in 1765 (Schöne, pp. 275-76). A similar proposal was introduced in the Chamber in 1912 (Leroy-Beaulieu, *La question*, p. 478).

[38] On the above measures and proposals see Levasseur, III, 213-26; Lagneau, *A.s.m.p.*, CXXIV (1885), 808-38; R. Frery, *Le péril national*, Book 4, chap. iv; E. Cheysson, *La question de population en France et a l'étranger* (Paris, 1883); *J.d.e.*, 4th ser., XXVI (1884), 482-83, XXIX (1885), 283-85, XXXVI (1886), 331-32; *J.R.S.S.*, L (1887), 194-96.

[39] E.g., see Levasseur (III, 217-26), who believed that France could hardly accumulate capital rapidly enough to employ everyone if each family of two

Bertillon distinguished between "illusory" and efficacious measures and indicated that pre-1912 measures enacted into law, or seriously considered by the legislature, were inadequate.[41] Among the "illusory" remedies Bertillon placed those designed to emancipate women, to increase or decrease restrictions on divorce, to close convents, to authorize *recherche de la paternité*, to restore religious faith and sentiments, to reduce and simplify formalities attendant upon marriage, to reduce involuntary sterility by diminishing venereal disease and alcoholism, and to diminish mortality. Among the efficacious proposals he placed the following: (a) increase of 10-50 per cent, according to family size, in the personal tax rates incident upon ménages of less than three living children and upon celibates, no increases for ménages of three living children, and complete exemption for

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replaced itself with three adults, and that private interests would impel men to procreate if an actual deficit of children were to develop. See also *R.p. et p.* (Oct., 1897), pp. 1-29.

[40] In 1783 M. Henry ("Celibat," in *Encyclopédie méthodique*, CXXXVIII, Paris, 1783, 352) advocated requiring celibates who raised no children for the *patrie* to pay taxes 4-8 times as high as those paid by fathers, in order that each would be serving his country in the same degree.

[41] Among those considered and/or enacted into law were minor tax reforms, slight easing of military burdens, slight assistance to needy families, and simplification of formalities attendant on marriage and a reduction in the age at which marriage could be contracted. Such reduction and simplification were effected in part in 1896, 1907, and 1933. Upon the simplification in 1907 of formalities attendant upon marriage, the marriage rate rose from 153 in 1901-05 to 160 in 1907 and 158 in 1906-10.

ménages of four or more living children;[42] (b) such increases in the tax rates on successions as assure that when the number of direct heirs is less than three the amount received by each heir will be no greater than if there had been three heirs; (c) modifications of the successoral law, providing testamentary liberty and in cases of succession *ab intestat* sharing on part of heirs in proportion to their children; (d) limitation of the military requirement to one son per family and the provision when necessary of financial aid for the wife and children of said conscript; (e) family allowances for minor children beyond the second in families of government employés and workers and in needy families not employed by the government; (f) reservation of all or nearly all government jobs for members of families of three or more living children; (g) reservation of all state favors and subventions (scholarships, jobs, state loans to building companies, etc.) for members of families of three or more living children and for concerns aiding such families; (h) certain arrangements favorable to procreation (e.g., leaves with pay for women workers before and after pregnancy, pensions for fathers of four or more children, sufficient succor for widows with four or more minor children, community aid for children of needy families; (i) fetes for children and members of large families, designed to honor the latter; (j) reform of electoral laws, providing to each voter an additional vote if he is married and further votes for each minor child; (k) suppression of neo-malthusian propaganda and practices. Bertillon seems also to have approved Leroy-Beaulieu's proposal to grant bonuses for births beyond the third, although he suggests that it would be a costly scheme.[43]

Leroy-Beaulieu, although an anti-collectivist, approved state intervention for the purpose of augmenting the rate of population growth and subscribed to many of Bertillon's proposals. Since he believed the solution to consist in the establishment in French belief and opinion of the proposition that the "normal" family must consist of three or more living children, and since he believed that man must be appealed to in terms of "hope" rather than in terms of "fear," Leroy-Beaulieu's approach differed in some respects from that of Bertillon and the Alliance nationale. Leroy-Beaulieu considered the Roman laws a failure; Bertillon believed them to have been successful. Leroy-Beaulieu believed that tax reforms could accomplish little, inasmuch as the decline in natality was not attributable to tax policies. He approved of the principle of progressive taxation of incomes and certain properties, but opposed the use of vexatious and punitive taxes aimed at celibates and married persons with less than three children. Man would neither marry nor procreate, he said, to escape punitive taxes or win lower tax rates on property to be bequeathed at death to heirs, direct or collateral. High tax rates on successions passing to collaterals, he said, were unfavorable to large families, inasmuch as there was relatively more transmission of property to collateral lines in large families, some of whose members usually remained unmarried. He urged that the attack on religion, especially Catholicism, cease, since its tenets and practices were favorable to natality. He urged the suppression of anti-Malthusian propaganda and practices. He advocated that education be stripped of its frills so that most children could go to work and begin to support themselves, in part, at least, at the age of thirteen or fourteen. He urged the comfortable classes to employ domestics with children, in order that this important group (domestics formed at least 5 per cent of the working population), usually childless because of employers' demands, might contribute its due portion of natural increase.

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[42] In short, whereas American theorists argue that tax systems should "provide revenues without altering population tendencies" (A. Buehler, *American Economic Review*, XXXIII, 1933, 234-44), most contemporary French theorists would employ the tax system to give positive impetus to natural increase. In 1912 a special tax on celibates was again proposed; in 1916, a revision of the state inheritance tax whereunder the state would take 20-70 per cent when families numbered 3-0 children, nothing when families numbered four or more children (*R.d.e.p.*, XXX, 1916, 128-29, 397-410).

[43] Bertillon, *Dépopulation*, pp. 246-309, 340-42.

More important were means of "certain efficacy": reform of the inheritance law, reservation of certain privileges for "normal" families, and plural suffrage for "normal" families. He favored increasing the size of the disposable portion and establishing conditions making easier and less arbitrary the settling of estates upon the death of the transmittor, chiefly because he believed that such reforms *might* augment natality. He advocated, second, that all privileged situations and subventions (e.g., scholarships, teaching positions [presumably in primary and secondary schools], tax reductions or construction loans designed to facilitate residential building) be reserved for members of "normal" families. While he did not believe that adjusting state relief for needy families to the number of children would stimulate natality, he said that the right of the individual to succor should be measured by the number of that individual's children. He proposed, third, that suffrage rights be modified so that heads of families of three or more minor children could cast three votes in all elections; married men with 1-2 children, two votes; celibates and childless family heads, one vote.[44]

Most important were proposals to reduce the military burden of "normal" families, to reserve public jobs for them, and to grant parents bonuses for each living child beyond the second. He would reduce to one year the military service required of sons of "normal" families and exempt fathers of such families from service in the reserve or in the territorial army. He would deny to members of subnormal families all exemptions from, and reductions in, service requirements. All jobs and positions provided by the state and local governments, with the possible exception of the 5 per cent requiring the most extraordinary talent, were to be inexorably reserved for the parents and children of "normal" families, the continued employment of the children to be contingent upon their founding normal families. Leroy-Beaulieu had much faith in this measure, inasmuch as the government and the railroads employed (exclusive of military and naval officers) over one million persons, and the average citizen greatly desired public employment. Presumably wages and salaries would be adjusted in part to family size. Should such a measure fail of adoption, Leroy-Beaulieu advocated as a half-measure to be applied in public employment and in industries doing work for the state a family allowance system, whereunder celibate and childless married employés and workers received 30 and 10 per cent less than the standard wage and those with two or more minor children 10 per cent additional for each child beyond the first. Unfamiliar with the equalization principle now in effect in private industry under the family wage system and of the opinion that in private competitive industry wage rates needed to be determined by worker-productivity, Leroy-Beaulieu considered the family wage system unsuited to private industry. He advocated, finally, that the state pay to parents upon the birth of each child beyond the second living child a bonus of 500 francs, 300 at birth and 200 upon completion of the first year of life. He suggested, further, that this sum might be augmented by: (a) bonuses of 100 francs from departmental or communal governments; (b) bonuses of 100-250 francs by employers. Opulent families not in need of such bonuses could return them, should they care to relinquish them, to a supplementary fund employed by the national and local governments to aid supra-normal families in need of further assistance. This general scheme, he estimated, would cost the national government but 187 million francs annually—a sum absolutely large, yet insignificant in view of the subsidies granted to many industries and the frequent wastage of governmental funds.[45]

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[44] Bills to base suffrage on family size have been introduced in the legislature a number of times since 1911. Plural suffrage has been advocated frequently, recently by C. Richet (*R.d.d.m.*, Sept. 15, 1934, pp. 140-41) on the grounds that plural suffrage was the best solution and that fathers made the best citizens. Critics argue that the measures proposed will not greatly redistribute political power; that since the ignorant are most prolific, plural suffrage would but increase the power of political incompetence. See *R.p. et p.*, XCIV (1918), 295, CXXXII (1927), 369-90; *R.d.e.p.*, XXX, 140-41; *R.S.* (files 1922 ff.); *New York Times*, Dec. 12, 1923; A. Enfière, *Le vote familial, la réforme electorale* (Paris, 1924); A. Toulemon, *La suffrage familial ou suffrage universal integral. Le vote des femmes* (Paris, 1933). If, as some hold, women are more disposed toward parenthood and the provision of aid for children and needy large families, granting women the right to vote may increase the strength of pro-family groups. In recent years the movement for woman's suffrage has been allied with the movement for familial suffrage.

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[45] *La question*, pp. 423-78; *A.s.m.p.*, CLXXVII, 469-71, CLXXIX (1913), 412-41. Critics of Leroy-Beaulieu (*ibid.*, pp. 490-94; *R.d.d.m.*, April 15, 1915, pp. 862-64) stated that population would grow if obstacles to free competition were removed; that bonuses could never be large enough to stimulate natality; that government employment should be distributed on the basis of ability and pay adjusted in part to familial needs; that bonuses would but aggravate multiplication by the less fit; that the restoration of religion

Since the war period the collectivistic populationist philosophy of Bertillon has come to prevail in an ever increasing degree. Seldom is the nineteenth-century liberal position restated. Wherefore it is not surprising that French official policy has become committed in some part to the "struggle for population." That part we shall now examine.

The measures inspired, in whole or in part, by the campaign to raise natality fall into two categories, private and public. The most important of the private measures, the family wage system, will be treated as a public measure because it has been placed under governmental control. Other private activities include the conduct and support of pro-populationist propaganda, particularly by the numerous associations organized for this purpose; the promotion of large family "days" and activities; the occasional action of landlords who reduce rents slightly for larger families;[46] the establishment of day nurseries for children of working mothers, and of private endowments to aid large families and grant them prizes. Most important is the Cognac-Jay Foundation, which annually distributes 25,000 francs to each of 90 selected French families of nine children (living or died for France) and with father not over 45; 10,000 francs to each of 100 selected French families with 5 children and father not over 35, and to each of 103 additional families with at least 5 children and father not over 35. Several hundred thousand francs are distributed annually by twenty other foundations. In the aggregate these private efforts are of little financial consequence, providing support for but a few hundred

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would prove more effective than other proposed remedies. While some said that bounties would increase natality, inasmuch as peasant families were willing to raise children for l'Assistance Publique at 10 francs per month (*R.d.e.p.*, XXX, 1916, 131), Richet in 1915 estimated that a bonus of at least 1,000 francs was necessary, one-fourth to be paid at birth, and at the completion, respectively, of the first, fourth, and tenth years of life (*R.d.dm.*, May 15, 1915, pp. 430-31, also *Bulletin*, 2d ser., CXXVII, 1917, 628, 634). See also G. Grimanelli, *La crise de la natalité en France. Ses remèdes* (Paris, 1923).

[46] *New York Times*, Oct. 28, 1928; A. Dachert's description of use of housing privileges in Strassburg to stimulate eugenic breeding (*Eugenics Review*, XXIII, 1931, 5-8). In the post-war period there has been much complaint of a deficit of urban housing facilities. In 1923 a bill requiring landlords to admit families with children was introduced in the Chamber.

children.[47] Presumably the most important contribution of the private groups is their persistent pro-natality propaganda.

With the exception of the laws passed in 1920 and 1923 to suppress neo-Malthusianism and abortion,[48] governmental efforts to stimulate natality and natural increase have assumed the form of positive pecuniary aids to parents and of reductions in certain burdens incident on parents. Most important of the measures in effect in France is the family wage system, developed independently and voluntarily under private and governmental auspices prior to 1932, when the system was made compulsory.[49]

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[47] Nevertheless, the neo-Malthusian *La grande réforme* (Oct., 1934) has condemned the Cognac-Jay awards, saying they encourage someone in every canton to procreate a family which he cannot support.

[48] In substance the anti-birth control law of 1920 makes propaganda in favor of contraception and abortion an offense against the "*bonnes mœurs*" and provides penalties of one to six months and fines of 100 to 5,000 francs for those found guilty of diffusing contraception propaganda; 6 months to three years and fines of 100 to 3,000 francs for those found guilty of provoking attempts at abortion. In a sense the law of 1920 is a continuation of the law of 1882, modified in 1898 and 1908, and ineffectively aimed at such propaganda. The law of 1920 apparently does not prevent sale of contraceptives, if unaccompanied by propaganda. Prior to 1923 abortion was treated as a serious crime meriting in theory relatively long prison terms. Few convictions were secured, however, despite the great number of abortions, for evidence was hard to secure and the population in general disapproved the heavy penalties. The law of 1923, therefore, has made the act of abortion a misdemeanor and has provided penalties of 6 months to 5 years and fines of 100 to 10,000 francs. The law of 1923 is the outcome of laws unsuccessfully proposed as early as 1891. Neither law appears to be attaining its objective. The trade in contraceptives continues. In so far as such trade is suppressed, the relative frequency of abortion is likely to increase under present circumstances. Since the passage of the laws of 1920 and 1923 there has been agitation for both an increase and a decrease in the stringency of these measures and in the degree of their enforcement.

Dr. D. V. Glass, who is engaged in making a comparative analysis of pronatality legislation, indicates in an unpublished study that: (a) the sale of several of the most important forms of contraceptives (condoms, douches) is not prohibited; (b) works describing the "safe period," recourse to which is permissible to Catholics, enjoy large sales, one work alone selling over 600,000 copies in 1935-37; (c) anti-birth control legislation, in so far as it makes access to contraceptives difficult, tends to increase the frequency of abortion; (d) the annual number of abortions, self-induced or performed by others, is at least half as large as the annual number of births; (e) while the frequency of abortions is usually higher in urban than in rural areas, it often is high in the latter and among foreign immigrants.

[49] The best general discussion of both the family wage system and of the other French measures designed to augment natality is that of D. V. Glass, *The Struggle for Population* (Oxford, 1936), pp. 50-91 and Appendix. Earlier general discussions are: H. Harmsen, *Bevölkerungsprobleme Frank-*

This system dates back at least to 1854 when L. Harmel, a disciple of Le Play, established in his factory a fund out of which to supplement the incomes of workers earning less than 4.2 francs per dependent. (Dieude says that Harmel's father based wages in part on family size as early as the 1840's.) In 1862 the French Ministry of Marine allowed seamen up to the rank of quartermaster and with over five years' service 10 centimes per day for each child under 10. (In 1908 a housing bonus was substituted for this allowance.) In the 1880's and 1890's a few employers, mostly of the Catholic faith and inspired in part by Pope Leo's Encyclical, "De Rerum Novarum" (1891), began to base wage payments in part on family size. Between 1895 and 1913 certain classes of persons, employed by a number of French ministries, by local and departmental governments, and by the railroads, were granted small constant or progressive allowances, in some instances for each child and in others for each child beyond the second or third. In at least one case (Ministry of Colonies, 1911) birth bonuses of 150 francs were granted.

Rising prices during the World War somewhat stimulated the spread of the system. As early as 1916 a private engineering firm employed a family wage system to adjust money wages to the rising cost of living. Other firms followed suit and, by

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reichs (Berlin, 1927), and discussion of French pro-natality legislation in *Veröffentlichungen auf dem Gebiete der Medizinalverwaltung*, XIX (1925); G. Dequidt, *op. cit.*,; P. Darlu, *R.p. et p.*, LXXVII (1913), 458-70; G. Lacoin, *Le musée sociale* (Oct., 1920), pp. 221-48. For careful studies of the family wage system and its application in France see C. Hoffner, *I.L.R.*, XXXII (1935), 462-91; M. J. Clark, *J.P.E.*, XXXIX (1931), 526-37; H. R. Vibart, *Family Allowances in Practice* (London, 1926); C. Dieude, *Les allocations familiales* (Louvain, 1929); G. Bonvoisin and G. Maignon, *Allocations familiales et caisses de compensation* (Paris, 1930); R. Rhein, *Les allocations familiales obligatoires* (Paris, 1932); Paul Douglas, *Wages and the Family* (Chicago, 1925), and *Quarterly Journal of Economics*, XXXVIII (1924), 250-93; also D. J. Saposs, *The Labor Movement in Post-War France* (New York, 1931), pp. 240-41, 326-36, 344-45; A. Egger, *Jahrbücher für Nationalökonomie und Statistik* (May, 1932), pp. 749-57; J. Bourdon, *R.d.e.p.*, XLV (1931), 1496-97. On present French social insurance provisions see W. Oualid, *J.P.E.*, XLII (1934), 328-43; also *I.L.R.*, XXXI (1935), 64-67. The Alliance nationale publishes, for the benefit of actual and potential parents, a complete summary of all provisions for aid to childbearing families: *Avantages reservés aux familles nombreuses.*

1918, had formed equalization funds to solve the problem of adjusting specific wage rates to family size and average wage rates to average marginal productivity and yet meeting the competition of producers employing workers with an over-all-infra-average number of dependents. However, as late as 1920, when the Comité des allocations familiales found itself forced to work out a generally applicable family wage system, there were but six funds embracing 230 employers and 50,000 employés and distributing about 4 million francs. In 1917 the state began to pay 100 francs per year per child under 16 to government employés earning 4,500 francs or less, subsequently increasing the allowance to 330 francs for each of the first two children and 480 for later children. Local and departmental governments adopted a similar policy, with the result that by the end of the war all lower paid categories of public employés were receiving family allowances.

In the post-war period a number of factors, of which the effort to check the decline in the birth rate was but one—albeit an increasingly important one—contributed to the spread of the family wage system: government example and pressure; the efforts of employers to meet conditions created by the rising price level and to avert or weaken labor opposition by alienating family men in part from the labor movement; worker demands for a living wage; belief in the justice of rationing systems developed during the war period; concern at the relative actual and incipient labor shortage created by war losses and low war-time natality. The state advanced the level of allowances to public employés a number of times until by 1929 the rates for first, second, third, fourth and later children were 660, 960, 1,560, and 1,920 francs.[50] Departments and cities, most of which had adopted the family allowance system by 1920, experienced a similar evolution. Moreover, under the laws of 1922 and 1923, departments, communes, and other public bodies were authorized to require firms doing work for such bodies to grant family allowances to their employés. Advantage was usually taken of this authorization, which was made applicable to all public works contracts in 1928. Although there was some demand as early as 1920 to make the system compulsory throughout French industry, this demand was opposed by those who believed that the system should and would develop "naturally," and that it would function most effectively if not subject to governmental control.[51] But when the system failed to expand rapidly after 1928 and the fear developed that employers, harassed by the depression, would throw off burdens imposed by the system, it was made obligatory by the law of March 11, 1932, and administrative decrees based thereon. In 1934 there was added to the labor code the provision that the introduction of the family wage system could not be used as a means to cut wages.

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[50] R. Rivet, *Bulletin* S. G. (Oct.-Dec., 1932), p. 121. Children needed to be under 16, under 18 if apprenticed, under 21 if in school.

Under the law of 1932 all employers must ultimately become affiliated with an industrial or regional equalization fund and grant to all French and foreign wage earners and salaried employés allowances for dependent children (i.e., children under 14, under 16 if in school, apprenticed, or physically unable to earn living). Adjustments must be made for unemployment, as there is no provision in the law requiring payment of allowances to the unemployed. In 1936 the act was extended to agriculture, in which industry as late as 1934 but 3,500 families were enrolled in equalization funds, it having been advocated that urbanward migration be checked by granting family allowances to rural families. In 1931 and 1935, respectively, the establishments enrolled in the funds numbered 25,000 and 218,000; workers, 1,850,000 and 4,238,000; francs disbursed, 380 and 780 millions. Investigation in 1936 disclosed that the act of 1932 had been applied by less than half the employers subject thereto, proprietors of medium- and small-sized establishments having been most slow to join funds. In 1936 the 222 approved funds numbered 286,000 establishments, 4,803,000 workers, 1,495,000 families receiving allowances, 2,600,000 child beneficiaries, 872 million francs disbursed. If one adds thereto the employés and disbursements of special establishments and various governmental units, the number of workers covered seems to aggregate about 6,600,000 (i.e., about half of the nonproprietor employed population); the allowances disbursed, about 2,500 million francs.[52] To this sum must be added disbursements of at least 20 millions expended by some of the funds for social services not legally compulsory. These services include visiting nurses (485 in 1936), childbirth bonuses (usually 100-200 francs), nursing benefits (sometimes as high as 300 francs per year per mother), milk allowances for children, prenatal and infant-welfare consultations, linen for babies, vacations for children (17,500 in 1936), and subsidies to companies constructing low-priced dwellings.

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[51] *L'économiste français* (June 2, 1928), pp. 676-77; (June 22, 1935), pp. 771-73.

The allowances per child usually progress with the number of children up to the fourth, varying from department to department and by occupation. The rates seem to have risen prior to 1933, when the law of 1932 went into effect. The following are roughly comparable monthly total allowances in francs received in 1925, in January, 1930, and in January, 1933, respectively, by families enrolled in industrial funds and containing the specified number of children: one, 19, 28, 25; two, 48, 67, 64; three, 90, 116, 118; four, 140, 182, 190; five, 194, 255, 264; six, 253, 328, 385.[53] After October, 1933, the minimum total allowance for a father of three minor children ranged from 45 to 120 francs; for a father of six, from 105 to 560. In short, as Glass concludes, monetary allowances per child fell with the deepening of the depression and the extension of the system by the law of 1932. Since 1934 the monetary level of allowances must have increased somewhat, for although the 312,000 families (21 per cent of all families enrolled in 1936) added to the funds in 1934-36 averaged but 1.48 children, in contrast with averages of 1.81 and 1.74 for all funds in 1934 and 1936, the monetary allowance per child has not decreased but has remained virtually constant. The apparent increase in the level of allowances is due to the fact that a large part of the wage increases granted in 1934-36 assumed the form of family allowances—a fact testifying to the increasing worker approval of the system.

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[52] *Bulletin mensuel des allocations familiales et des assurances* (May-June, 1937); G. Bonvoisin in *Compte rendu du XVI^e congrès national des allocations familiales* (Paris, 1936); *M.L.R.*, XLI (1935), 651, XLIII (1936), 699-700, XLV (1937), 647-49; Hoffner, *op. cit.*, pp. 481-82. The above total figure (6.6 millions) includes an estimated million workers in special services and 800,000 in public services.

[53] *J.S.S.P.*, LXVII, 141; Bonvoisin and Maignon, *op. cit.*, p. 33; Glass, *op. cit.*, p. 58. Rates were lower in the few agricultural funds and fell after 1932.

While the family allowance system aids the parent, it does not increase familial income by an amount even approximately equal to the expense of rearing the child. Thus in 1932, Glass estimates, the average family allowance increased by 15-20 per cent, or 4-5 per cent per child, the income of an unskilled worker with four dependent children. In 1932-34, in three departments paying the lowest relative allowances, family allowances increased the nonagricultural workers' wage in families of six but 1.9-3.3 per cent per child; in the three departments with the highest relative allowances, 4.6-7.7 per cent. The corresponding figure for agricultural workers was 3.2-3.7 per cent; for lower-grade civil servants, 16.6. If, on an average, the addition of a child adds at least 20 per cent to the basic cost of living of a childless couple, it is evident that the family allowance system supplies but 10-33 per cent of the probable out-of-pocket costs per child in a family of six children among nongovernmental employés; and about four-fifths in a family of corresponding size among lower grade civil servants. In smaller families the proportion is less.[54]

Several measures designed to increase the real income of families of designated size and condition have been put into effect in the past quarter-century. Already in 1905 it was stipulated that slightly more assistance be granted to families entitled to assistance who had reared at least three children to the age of sixteen. Under the law of 1913 allowances of 80 to 90 francs, the amount depending upon the relative cost of living, were granted annually, when need was proved, for each child beyond the second of widows, for each beyond the third of widowers, and for each beyond the fourth when both parents were living. Because of the rising cost of living these annual allowances were raised during the war. Today this law applies only to the families of foreign nationals with whose governments (i.e., Italy, Poland, Belgium, Luxemburg) France has made a reciprocity agreement relative to provision for the needy, French families being provided for under the law of 1923 designed to encourage large families. To qualify for assistance (270-300 francs per child under 13, or under 16 if apprenticed, in school, or ill), the familial means of the foreign families of specified nationality must be insufficient and there must be at least three minor children if both parents are living, less than three if one or both parents are dead or missing.

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[54] Cf. Glass, *op. cit.*, pp. 59-61, 85. The 20 per cent assumed above is a minimum suggested by both English and American data. In proportion as the wage received exceeds minimum *felt* needs, given relative increases of the received wage through family allowances will provide more than 10-33 per cent of the out-of-pocket cost of rearing the child. French wages and salaries in general appear to be so little in excess of minimum standards, given present cultural milieus, that the conclusion that present family allowances cover but a fraction of the present cost of rearing a child requires no qualification. Some French writers exaggerate the contribution toward child-rearing costs made by the allowance system (e.g., *L'économiste français*, June 14, 1930, pp. 740-41). For an estimate of family costs see M. E. Leeds and C. C. Balderston, *Wages* (Philadelphia, 1931), chaps. ii-iii.

Under the law of 1923 just referred to French parents who pay no income tax and who receive no family allowances as governmental employés are entitled to family allowances for legitimate or legitimized children under 13 (under 16 if the child is apprenticed, in school, or in ill health) from the third onwards. In 1935 these annual allowances were as follows: both parents living, 84 francs for the third child, 300 for the fourth, 480 for the fifth and subsequent children; if mother dead or missing, 300 for the third, 480 for fourth and later; if father dead or missing, 300 for second, 480 for third and later; if both parents dead or missing, 300 for first, 480 for second and later. The present allowances are slightly higher than those provided in 1923.

Leroy-Beaulieu's proposal to pay birth premiums has been effected in part since 1921, for the state now subvents departments which grant premiums to French families, or French mothers, upon the birth of a third or fourth child. In October, 1935, the state subvention to departments applied only to families not paying income tax. In 1935, 85 departments were granting birth bonuses directly or in conjunction with communes. Initial bonuses range from 100 to 500 francs, progressing in most departments to maxima for high order births ranging from 150 to 1,250 francs. Bonuses are paid on approximately one-fourth of all live births (26.7 per cent in 1934).

Reference has already been made to the law of 1913 (anticipated by a law of 1909) whereunder needy mothers were allowed 0.5-1.5 francs per day during the four weeks preceding and the four weeks following delivery, this sum to be supplemented by ½ franc daily following delivery, if the mother suckled her child. In 1919 a grant of 15 francs per month for one year was allowed needy mothers who suckled their children. In some instances local governments supplemented this bonus. Since 1930 each Frenchwoman, not entitled to aid under the social insurance law, is granted, if in need, 2½ to 7½ francs daily during the month preceding and the month following delivery, and, if she suckles her child, a premium of 45 francs per month for the first 6 months and 15 per month for the second six months. Moreover, an employer is forbidden to employ a woman during the month after delivery or to discharge her if she is absent not more than three months because of pregnancy. This three-month period may be extended upon the advice of a physician. (As early as 1909 pregnant women were legally entitled to eight-week leaves from work.) Women insured under the social insurance law receive half-pay for 12 weeks (6 before and after delivery) and suckling bonuses not in excess of 950 francs (150 per month for 4 months, 100 for 2, 50 for 3) or (if they are unable to suckle) milk allowances not in excess of two-thirds of the suckling bonuses. As we indicated earlier, additional confinement and suckling allowances are also provided by some of the family wage funds.

Certain advantages accrue to families of given size under the law providing for social insurance, unemployment benefits, and pensions. The social insurance law covers only workers whose incomes are below certain levels. These eligibility levels are raised 11-60 per cent if workers have 1-3 or more children. Under the social insurance law insured wives and children receive sickness allowances. Sickness, invalidity, and death payments are adjusted upwards by specific amounts for each child. Orphans' pensions are also provided. Unemployment benefits are augmented (roughly 3-12 francs daily) when there are children. Children of workers accidentally killed while at work are entitled to pensions. Government employés who have raised three children to the age of 16 are allowed a 10 per cent increase in pension, and 5 per cent for each additional child with the proviso that the pension cannot exceed 70 per cent of the last year's salary. Until the age of 21, orphans are entitled to pensions equal to one-tenth of what the father's pension would have been. Other pension schemes in effect in France make some allowance for the number of children raised. Government workers need not retire if they are married and have three children. Moreover, the children of government workers receive free education up to the secondary level (since 1921).

Under a number of laws, most of them passed in the war and early post-war years, parents of larger families enjoy tax exemptions and certain fiscal advantages. The income tax rate is highest, other things equal, for childless or unmarried men over 30 years of age, the average tax rate falling as the number of children (under 21 or incapable) per tax payer increases. Succession duties vary inversely with the number of children. *Impôts cédulaires* are reduced, other things equal, as the number of children (under 21 or incapable) increases, the total reduction in tax paid not to exceed 800 francs per child. The property of working-class "large families" is exempt from attachment for debt. Families of specified size also enjoy certain local tax exemptions and rebates. The provision of housing for families of 3 or more children is facilitated by fiscal exemptions, by state subventions to private or public bodies which build houses for such families, by preferences which must be shown large families with respect to cheap houses, and by the law of 1932, whereunder co-operatives established to build or buy "cheap houses" primarily for large families (i.e., with 6 or more children) may borrow from sociétés de crédit immobiliers. The effect of some of these measures is to reduce the interest cost of housing projects. Members of large families enjoy preference with respect to certain scholarships and assistance granted by national institutions. By application of a principle in effect since 1900, families with 2-5 children pay 12½-25 per cent less per child for secondary education.

Miscellaneous advantages are given to large families. Since 1920 lower tariffs and admission prices have been charged members of families of three or more children by railroads and public institutions. In the primary and secondary teaching field some preference is at times given members of large families. Since 1920 bronze, silver, and gold medals of the "*Famille Française*" have been awarded mothers of 5, 8, and 10 living children. Prizes are offered inventors with over two children. During the economic stress of 1920 members of large families were enabled to obtain bread, sugar, and milk at reduced prices. Preference in military matters has also been shown members of large families. Soldiers with children have enjoyed greater rehabilitation and pension allowances. Needy families of those in military service are granted small daily allowances which are augmented for each dependent child. The military laws of 1923 and 1928 favored members of large families, whether in active service or in the reserve, as to place and time of service, classification, and so on. During the war leaves were granted both mobilized soldiers and married women employed in industry in order that natality might be stimulated.[55]

The various measures which we have described have had as their objectives: (a) to diminish infant mortality; (b) to create a milieu favorable to familial life and natality and to foster natality through employment of various economic stimuli. We shall now seek to determine whether or not these objectives have been realized.

The first objective, as we have already seen, has been achieved. Infant mortality, 164 in 1891-1900, fell to 109 in

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[55] Bernard, *op. cit.*, pp. 292-93. The variations in natality during the war correspond with the periods when these leaves were numerous.

1912-13, to 97 in 1920-24, 76 in 1931-33, and 67 in 1936. Within the family-allowance funds infant mortality, already appreciably lower a decade ago than general infant mortality, has since fallen somewhat more rapidly than infant mortality in comparable areas. The still birth rate is also lower in the fund population. For this decline in infant mortality in the population at large and in the funds the nursing bonuses and the various types of assistance given mothers before, during, and after delivery are chiefly responsible. Within the fund population these nursing bonuses and aids are supplied in a greater degree than in the population at large. Since 1913 both mercenary nursing and artificial feeding have declined appreciably. Already in 1923 breastfeeding appeared to be increasing among mothers enrolled in the funds. By 1927, 95 per cent of the mothers in some funds were nursing their children, gastro-intestinal ailments declining as a consequence. Moreover, the relative number of mothers working close to delivery period has declined.[56] Yet, while the realization of Rousseau's dream has helped to augment natural increase, its further realization can contribute relatively little to natural increase. Given natality and infant mortality as of 1936, a 7 per cent increase in natality would swell natural increase nearly as much as a 100 per cent decline in infant mortality.

Whether the tendency of natality to decline has been checked is difficult to determine. That natality has not increased is evident. It has been suggested by some that the pecuniary rewards given to French parents are quite inadequate; that other anti-natality motives (e.g., tax on patience and endurance and health and mobility of one or both parents) are not counterbalanced; that a system of bonuses and family allowances will raise the standard and scale of living of the hard-pressed classes and thus make necessary a constant increase in these allowances in order to overcome the constantly rising economic barrier to procreation.[57] To this last contention two replies are possible: (a) the

[56] *L'économiste français* (June 2, 1928), pp. 675-77. Data are presented in the annual reports of the national family allowance congress.

[57] On these points see Paul Douglas, *Quarterly Journal of Economics*, XXXIV (1925), 476-82; A. M. Carr-Saunders, *Population* (London, 1925),

system of allowances does not elevate the objective or subjective standards of living, for the allowance per child never equals the cost of the child; (b) in proportion as income is diverted from those without children, the capacity of those without children to spend more and hence to set a consuming pace for those with children is reduced. In general, the following proposition appears to be valid: however complex the motivation to and from procreation, it is logical to assume that in a given cultural milieu at a given time there are some (perhaps many) persons on or near the margin of procreating and rearing children, and that every additional economic stimulus will push some of the marginal and extra-marginal couples within the childbearing area. Accordingly, it is valid to assume that at any given time French natality is higher than it would have been in the absence of such stimuli. One may not assume, however, that these stimuli are operating upon the trends immanent in the cultural milieu in a manner and degree sufficient to retard appreciably or to reverse the effects of natality depressants operating through time. Such an hypothesis must be proved or disproved.

A strong will to believe that the family allowance system is favorable to natality has permeated the writings of the exponents of the system, particularly since 1924, when inquiry was first made concerning the effects of the system upon natality. It has been pointed out: (a) that the birth rate per 1,000 employés in funds has exceeded that in the population at large aged 15-60 by one-third to one-half; (b) that the birth rate among families employed by the Michelin firm, which paid generous allowances prior to 1933, was very much higher than that in the rest of the population in the same communities;[58] (c) that the relative number of first-born has increased;[59] (d) that the introduction of family allowances and birth bonuses in groups

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p. 65; C. Gini, *Journal of Political Economy*, XXXVIII (1930), 682-96; C. Lambert, *La France et les étrangers* (Paris, 1928), pp. 31-35; H. Harmsen, *op. cit.*, pp. 78-102, 196-97; C. Richet, *Je sais tout* (March, 1935), pp. 31-32.

[58] These data appear in the annual reports of the congress on allowances, and in various discussions. E.g., Rhein, *op. cit.*, p. 268; *J.S.S.P.*, LXVII (1926), 396; Bonvoisin, *Proceedings*, VIII, 547-48; *R.S.*, XC (1930), 288-89.

[59] Dieude, *op. cit.*, pp. 113-17.

or regions has increased natality;[60] (e) that the rate of decline in French natality has been declining and, since the war, has remained below that of other countries.[61]

Propositions (a) to (c) have been analyzed by Mr. Glass as carefully as the nature of the inadequate data permits. With respect to (a) and (b) he states that in light of the selected and changing composition of the population enrolled in the funds it is not possible to determine whether or not, assuming all conditions but membership in allowance-funds to be constant, natality is higher or has been increasing as a consequence of the establishment and spread of the allowance system. To some extent trends in rates and ratios (see [c]) are biased upwards by the apparent tendency of larger families to migrate toward areas and employments where they are better treated. With respect to (c) he concludes that while in Haut Rhin the number of children 0-1 per employé and the ratio of children 0-1 (or 1-2) per employé to children 13-14 per employé rose in 1921-26 (i.e., prior to the time when the ratios were distorted by low wartime natality), one cannot tell whether the allowances have stimulated natality (or the extent of such stimulation) until detailed data on age composition are available.[62] Correction for changes in occupational and marital composition are also necessary if the effect of allowances is to be measured with convincing precision. Proposition (d) is unconvincing on the same grounds enumerated in the discussion of (a)-(c). Moreover, among government employés those familiar with the French civil service can find little, if any, increase in family size as a result of the family allowance system, a conclusion plausible in view of Glass's estimate that three children add to the income of a lower grade civil servant only about half as much as they add to his cost of living.[63]

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[60] See Mauco (p. 23) on natality among miners and bank employés; report in London *Times* (May 27, 1926) on Meurthe-et-Moselle, where bonuses, homes for unmarried mothers, and an anti-venereal and public health campaign were introduced; H. de La Perrière, *Les allocations familiales dans la région troyenne* (Troyes, 1930), p. 36.

[61] P. Lefebvre-Dibon, *Proceedings*, VIII, 25; R. Husson, *Bulletin* S.G. (Jan.-March, 1931), p. 297.

[62] Glass, *op. cit.* There is no significant correlation between fertility by department in industrial areas and the percentage of wage earners and employees enrolled in family allowance schemes, Glass indicates in an unpublished study.

Proposition (e)—viz., that the rate of decline in French natality is steadily slackening and falling below the corresponding rate in other countries—if valid, suggests that the anti-natality factors in the French cultural milieu are approaching the limit of their effectiveness; it might even imply that natality will rise after the lower limit is reached. Unfortunately, the evidence no longer supports proposition (e) or its implications, for, as we indicated in part in Chapter III, the rate of decline seems again to have begun to increase. The rate of decline in French crude natality was lower in the period 1851-60—1871-80 than in the two preceding twenty-year periods; it was higher in the ensuing twenty-year period than in any preceding twenty-year period, rising to yet higher levels in the twenty years preceding the war. The movement in general fertility and in the fertility of married women of childbearing age somewhat paralleled that of crude natality, reaching a maximum in the pre-war decade. Although crude natality, general fertility, and fertility among married women 15-49 fell between 1911-13 and 1930-32, the rate of decline was less than in the pre-war decade, the annual rate of decline in the fertility of married women 15-49 in 1886-95—1906-13 being 4 times that in 1906-13—1931 and 2½ times that in 1925-29—31. The annual rate of decline in the gross reproduction rate was higher in 1904-07—1911 than in 1892-97—1904-07, but fell appreciably below the latter level in 1911-26. In brief, each of the indices of reproductive force exhibited a marked diminution in the rate of decline in the post-war period. After 1925, however, the rate of decline again increased. In 1926-31 the annual per cent decline in the gross reproduction rate was double that in 1911-26 and nearly equal to that in 1892-97—1904-07. Crude natality fell 13.8 per cent in 1931-36, 7.5 in 1926-31, the acceleration being due only in part to changes in age composition. The observed number of live births has fallen below the number forecast by Sauvy (on the supposition that specific fertility would remain unchanged) by ever greater percentages since 1931 (i.e., one per cent in 1932, slightly over 10 in 1935-36). As yet the observed figures are not falling below Sauvy's new forecasts based on the supposition that specific fertility remains as in 1935, possibly because new immigration has slightly increased the number of births.[64]

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[63] Glass, *op. cit.*, p. 85; W. R. Sharp, *The French Civil Service: Bureaucracy in Transition* (New York, 1931), p. 211; L. D. White *et al.*, *Civil Service Abroad* (New York, 1935), p. 123.

Analysis of the decline in marital fertility by age group confirms the implications of the data presented in the preceding paragraph. Between 1901-13 and 1930-32 marital fertility by representative age groups fell approximately the following per cent per year: 25, 0.79 per cent; 30, 0.92; 35, 1.09; 40, 1.29; 45, 2.09. The corresponding percentage declines between 1925-27 and 1930-32 were: 0.92, 2.72, 2.34, 2.1, 2.66. The number of legitimate births per 1,000 women of specified age fell by the following per cent per year between 1896-1900 and 1932: 20-24, 0.94; 25-29, 0.81; 30-34, 1.04; 35-39, 1.24; 40-44, 1.48. Between 1925-27 and 1930-32 the corresponding percentage declines were: 0.4, 1.4, 3.0, 1.8, 2.4. In sum, the percentage declines per annum were higher in the period 1925-27—1930-32 than in the longer periods in all age groups but that ranging from 20-24. The rate of decline has increased despite the pro-natality measures.[65]

In light of the evidence presented it appears that while the various natality-stimulating measures have made the decline in natality less than it would have been had they not been adopted, they have not checked the decline or stabilized fertility at a level adequate to replace the population. Julius Wyler's opinion that at most the French measures can check the spread of the two-child family system but cannot foster the development of larger families apparently remains valid.[66]

In view of the evidence presented, the French pro-natality legislation is open to criticism on at least four grounds. First, it is ineffective, in part because the pecuniary aids provide parents with but a fraction of the cost of rearing children. The entire amount spent per year in the form of family allowances, birth bonuses, maternity benefits, and other forms of assistance apparently does not exceed 3½ billion francs, less than 2 per cent of the national income and but one-third of the average annual outlay for military and air defense in 1936-37. Second, the main burden, at least in the equalization funds, falls not upon those most able to pay but upon the wage-earning and salaried classes. Relative to their ability the French well-to-do classes apparently contribute no more to the stimulation of natality than to its augmentation.[67] Third, the French pecuniary stimulants are not adapted to variations in costs of living by occupation. Fourth, no effort is made to promote eugenic and to check dysgenic selection.[68]

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[64] See Sauvy's estimates, *J.S.S.P.* (Dec., 1928), p. 325; (June, 1937), p. 234.

[65] Rates computed from P. Depoid, *Bulletin* S.G., XXVI (1937), 324, 331; *Notizario Demografico*, IX (1936), 117.

[66] *Weltwirtschaftliches Archiv*, XXIX (1929), 30-40, especially p. 33. See also H. Harmsen, *op. cit.*, pp. 101-02.

[67] In 1908, 445 members of the "*classe 'dirigeante'*" had on an average 1.27 children (Bertillon, *Dépopulation*, p. 138).

[68] Certain of the problems treated in this and earlier chapters have been discussed by M. Huber *et al.*, in *La population de la France* (Paris, 1938), which came to my attention after this study was completed.

CHAPTER XI

CONCLUSION: INTERPRETATION

INASMUCH as the main factual findings of this study have been summarized in the Introduction, the present chapter will be devoted to an analysis of the probable consequences of French population trends and to an appraisal of French measures to stimulate population growth. Four main topics will be dealt with: (I) the determinants of per capita output and the relation thereto of demographic factors and trends; (II) the nature of the relationship between per capita output and money income on the one hand and per capita welfare on the other; (III) the determinants of fertility levels and trends; (IV) contradictions implicit in state demographic policies and in need of resolution.

I. Population Density, Population Trends, and Per Capita Production

Within either a closed economy, or an economy whose relations with other economies are taken to be constant, per capita production depends upon: (1) the fullness of employment; (2) the geographical distribution of the population; (3) the supply of resources per head; (4) the efficiency with which the resources are used. Per capita output over a period of time will depend upon the changes that take place in these four determinants and upon whether the exchange ratio between the given economy and all other economies becomes more or less favorable to the former. Concerning this last condition nothing will be said in this study. It need but be noted that France is dependent on foreign sources for part of her food supply and for a number of minerals, and that any increase in the relative price of these goods will make net per capita output in France less than it otherwise would be.[1]

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[1] The present writer has treated elsewhere at greater length and with greater precision every point made in this section. See *Proceedings*, IX, 33-60; *Scribner's Magazine*, LXXXIX (1931), 367-76; articles in *Southern Economic Journal*, III-IV (1936-37); *Harvard Business Review*, XII (1934), 204-21; article on population trends and unemployment, to appear in *Southern Economic Journal* (Oct., 1938).

Fullness of employment depends upon (a) the relative number of employables in a population; (b) the percentage of employables actually employed; (c) the proportions in which the employed are distributed among occupations. Each of these conditions is partly governed by demographic factors. Concerning (a) two propositions may be laid down. First, as a population approaches a stationary level the relative number of persons of working age increases and, as a consequence, assuming the percentage of employables employed to remain constant, per capita output for the population as a whole rises.[2] Thus in 1931 when the age composition of the French population approximated more closely that of a stationary population than in 1851, it contained about 3½ per cent more persons aged 20-59 than it would have contained, given the age composition as of 1851. Second, given a level of fertility sufficient only (say) to replace the population, the relative number of women able to work (i.e., not demobilized by childbearing) will be greater than it would be were the level of fertility higher. Thus had fertility in 1931 been as great as in 1851, at least 300,000 more women would have been engaged in childbearing than needed to be so engaged to replace the population as of 1931.

Although it is self-evident that per capita output will be high when the average percentage of employables employed is high, it is not clearly evident what the net influence of changes in the rate of population growth has been. Density of population per se cannot influence the level of employment. Changes in the rate of growth, and even the persistence of an appreciable rate of growth, should, on a priori grounds, be more conducive on the balance to unemployment than a condition of zero growth. For, under either of the former conditions, the fluctuations in the fixed capital producing industries will be more pronounced, other things equal, than they would be in an economy whose population was stationary. Furthermore, the additional unemployment associated with these fluctuations will not be completely counterbalanced by the effects of other conditions which are less conducive to unemployment in a growing than in a stationary population. Unfortunately, the statistical data on the comparative frequency of depression and prosperity in countries such as France, Germany, and England in the century preceding the war throw no light upon the influence of population growth as such. There is no correlation between the relative frequency of prosperous years and the rate of population growth, presumably because the influence of the rate of population growth, if any, is masked by the differential incidence of other determinants of prosperity and depression.[3]

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[2] For evidence see L. I. Dublin and A. J. Lotka, *The Money Value of a Man* (New York, 1930), pp. 50-54, 164-65; also discussion below.

Per capita output will be at a maximum, other things equal, when each person actually employed is so employed that, given his training and tastes, he is producing as much market value as, or more market value than, he could produce in any other employment equally acceptable to him. (Needless to say, per capita output will be highest, other things equal, when the nonhuman productive resources are distributed in an analogous fashion.) The extent to which a working population is distributed among employments in proportions conducive to maximum per worker output is conditioned primarily by nondemographic factors such as the educational system, the arrangements made to acquaint workers with comparative earning and working situations, the degree of prevalence of monopoly controls among certain classes of employers or workers, and so on; it is influenced, in some degree, however, by variations from occupation to occupation in the rate of natural increase among those filling such occupations. For, other things equal, if these rates of natural increase vary widely, and if these variations are not counterbalanced by variations in the rate at which comparative total demands for the services of such occupational groups grow, the occupations experiencing relatively higher rates of natural increase will become relatively overcrowded. Presumably, then, the reduction in spreads between natural increase in the more fertile and natural increase in the less fertile occupational groups in France may be responsible in part for the improvement in occupational composition indicated in

[3] See data in W. C. Mitchell, *Business Cycles* (New York, 1927), pp. 407-50.

Chapter II. That this composition falls far short of the ideal in France is suggested, however, by the persistence of tariffs and of subsidies to groups, by evidences of quasi-monopolistic barriers to free factor movements, and by the great variations from occupation to occupation in rates of remuneration.[4]

Whenever the pattern of population distribution throughout a country differs from the pattern of resource distribution, per worker output will be higher in some areas than in others. Given such a situation, over-all per capita and per worker output may be increased through the migration of workers and population from low-income to high-income areas. If the costs of migration (which are relatively small) are ignored, and if conditions other than regional variations in the population:resource ratio are held constant, interregional migration will add to over-all per capita output so long as regional marginal productivity levels differ. The relative volume of interregional migration necessary to maintain regional marginal productivities at the same level will vary, other things equal, with the relative amount of variation from region to region in rates of population growth. Judging from the regional variations in per capita income and wealth in France, further geographical shifts in the population would tend to elevate the level of over-all per capita output. For despite the income-elevating migratory movements that have taken place in the past, regional variations in the rate of natural increase, coupled with other factors, have prevented the French population from achieving that geographical distribution which will make possible the greatest per capita output, given present cultural and economic and resource conditions.

More important as a determinant of per capita output than the conditions enumerated above is the ratio of resources to population. By resources we mean all factors of production, artificial or "natural," which men employ in the creation of goods and services. Increases in numbers relative to resources, the state of the arts and technology remaining constant, produce one or more of three effects: (a) within limits an increase makes possible the attainment of the economies which accompany the establishment of larger as against smaller scale producing units and/or a more economical "fit" among industries; (b) if continued, an increase makes necessary the exploitation of resources, whether artificial or "natural," under conditions entailing a diminution in per worker output at the intensive and the extensive margins; (c) an increase accelerates the rate of consumption of the supplies of "exhaustible" resources (e.g., coal, ores) whereon, in the last analysis, depend the supplies of "artificial" resources, and thus shortens the period of time during which a given level of output can be maintained. It is evident, therefore, that per capita output will be high and will tend to remain high in proportion as the following conditions are realized: (1) population is held to the smallest possible number necessary to realize the economies under (a) and maintain at a minimum diseconomies under (b); (2) nonexhaustible resources (e.g., water power) and reproducible resources (e.g., forest products) are substituted when at all economically feasible for exhaustible resources; (3) the quantum of waste per utilized resource unit is reduced through improvements in technical efficiency.

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[4] Despite France's relative lack of physicians (see R. Pierreville, *L'inégalité humaine devant la mort et la maladie*, p. 424) and apparently of various classes of technicians, fear is expressed that an oversupply of "educated" persons will develop (see A. Sauvy, *J.S.S.P.*, June, 1937, pp. 239-41).

From the longer run point of view none of the factors and conditions mentioned is as significant as the rate at which the supply of exhaustible resources is being diminished. For it is upon exhaustible resources (iron, copper, zinc, lead, tin, coal, oil, etc.) that the industrial economy of a country such as France is founded. The material level of living and the number of individuals supportable at any designated level will fall markedly. Moreover, long before the supply of exhaustible resources is exhausted, rising per unit costs (i.e., increasing direct and indirect labor input per unit of resource output) will depress both the material level of living and the number of persons supportable in France or in any other country with an industrial economy. Accordingly, as the capacity of industry to support population shrinks, agriculture will have to be relied upon in an increasing degree as the source of the diminishing per capita needs. And even the capacity of agriculture to support population will diminish in proportion as the supplies of essential fertilizers and soil-fertility preservers are exhausted or obtained under conditions of rising labor costs. Whence it follows that regardless what natality-stimulating policies are today pursued, the day will come within the next 100-150 years when a marked diminution in numbers will prove necessary. Only a chemical revolution can prevent the coming of this day.[5]

The efficiency with which resources are used is conditioned by three factors: (a) the state of technological culture; (b) the extent to which that culture is diffused through the population; (c) the genetic composition of the population. Of these factors only the third is dependent primarily upon conditions of natural increase; it will be superior or inferior in proportion as natural increase comes from the genetically superior rather than from the genetically inferior strata. The propositions laid down in this paragraph are subject to certain qualifications, however. First, the higher the genetic level of the population, other things equal, the more advanced will be the state of technological culture, and the smaller will be cost of achieving a given level of diffusion of this culture. Second, since, as we shall indicate below, class variations in natural increase are governed predominantly by a variety of factors cultural in nature, the genetic composition is ultimately a necessary concomitant of the prevailing culture-pattern. Third, although the rate of improvement in technology and invention and the degree of utilization of invention are essentially independent of demographic factors,[6] the rate of improvement will be higher within limits, given some concentration of the population within urban centers wherein the necessary exchange and reshuffling of

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[5] For treatments of the points made in this paragraph see R. A. Ortner, *Scientific Monthly* (May, 1933), pp. 435-43; E. W. Zimmerman, *World Resources and Industries* (New York, 1933); *Recent Social Trends in the United States* (New York, 1933), chap. ii; B. Weinberg, *Revue générale des sciences* (1926), No. 2, especially pp. 44-45.

[6] On the determinants of the rate of change in technological culture, see National Resources Committee, *Technological Trends and Their Social Implications* (Washington, 1937), Parts I-II; P. A. Sorokin, *Social and Cultural Dynamics* (Cincinnati, 1937), I, 125-80.

"ideas" are possible in a greater degree than in areas of little or no population concentration.

We have been concerned thus far with the effects exercised upon the level of per capita income by changes in the ratio of population to resources, and by variations from class to class in the rate of natural increase in the populations composing respective classes. We shall now touch upon the possible economic effects of a decline in the population of a country such as France. These effects, as distinguished from the effects of the conditions already treated, are of three kinds: (1) per capita productivity may fall because of unfavorable changes in age composition; (2) unemployment among employables may tend to increase because those responsible for the performance of the entrepreneurial function fail to adjust the industrial and occupational structure to the variations from occupation to occupation in the rate of decline in the absolute number employable by occupation at economically justifiable rates of remuneration; (3) unemployment may be increased by growing maladjustments between the rate of remuneration of labor and the rates of remuneration of land, old capital, and new capital.

The precise effects of changes in age composition upon per capital productivity are difficult to forecast in view of the fact that the functional relationship between age and productivity varies with occupation. Pugilists lose their skill and capacities at an early age; clerical workers, carpenters, and persons engaged in analogous occupations may remain as efficient as ever until the fifties or early sixties. Accordingly, the effect exercised upon per capita productivity by changes in the age composition of a population is conditioned by the occupational composition of the population. If it may be assumed that per capita productivity in France is conditioned, other things equal, by the relative number of persons aged 20-59 in the population, it is evident that changes in age composition will not depress per capita productivity in France in the next fifty years. In 1935, 55.8 per cent of the population fell in this age group; the respective percentages in 1960 and 1985 will be 58.9 and 58.7, assuming that France's population declines in accordance with the most likely of M. Sauvy's forecasts.[7] Nor is this trend much altered if it is assumed that earning capacity times frequency of employment rises from a minimum in age group 18-19 to a maximum in age group 40-44 and then falls to a new minimum in age group 65-69. Per capita productivity will be somewhat higher (perhaps 5-10 per cent) in 1960 and in 1985 than in 1935.[8] Moreover, assuming a gradual fall in the absolute number of births and no appreciable extension of life among those aged 60 or more years, per capita productivity will not deviate much from the 1935 level, even though the population continues to decline. If, however, the number of births is increased and maintained at a higher level, per capita productivity will be depressed below the level at which it otherwise would have been and will remain so depressed until a sufficient number of the newly born have aged into the productive categories. (Such a diminution in per capita income is one of the initial costs involved in the conversion of a low level of fertility into a higher level.) Application of these conclusions to France suggests: (a) that the numerical decline in total population will not per se cause a decline in per capita productivity for at least fifty years; (b) that the initial effect of an increase in the absolute number of births, other things equal, will be a diminution in per capita productivity, the degree of diminution depending upon the relative size of the increase in the number of births.

A continuous diminution in the number of persons composing an economy may be accompanied by an intensification of three conditions potentially conducive to unemployment (a) a diminution in the ratio of the number of persons entering the ranks of the employed for the first time to the number permanently abandoning these ranks (because of age and other causes of permanent incapacitation) per time period; (b) the tendency for the employment capacity of given industries and occupations to shrink at a rate in excess of the rate at which the number of persons employed in such industries and occupations is diminished by death and permanent incapacitation through age or injury; (c) the degree of pessimism with which entrepreneurs anticipate the future.[9] It need hardly be added that, given two conditions which are independent of the rate of population growth, unemployment would not arise because of a diminution in numbers. These two conditions are: (1) perfect inter-occupational mobility of the factors of production; (2) possession by the entrepreneurial class of sufficient information and organizational ability to direct the mobile factors of production into various employments in such proportions as will yield a satisfactory and unemploymentless state of equilibrium. In proportion as these two conditions are realized, whether through collective or other types of action, an intensification of conditions (a), (b), and (c) will not lead to an increase in the relative amount of unemployment.

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[7] See *J.S.S.P.* (June, 1937), p. 233.

[8] It has been assumed: (a) that 75 per cent of those in the age group 18-19 are employed, 90 in age groups 20-24 and 55-59, 100 in age group 25-49, 80 in age group 60-64, and 50 in age group 65-69; (b) that per worker productivity is at a maximum (=100) in age group 40-44, and at the following percentages of the maximum in the remaining age groups: 18-19, 42; 20-24, 65; 25-29, 85; 30-34, 90; 35-39, 96; 45-49, 98; 50-54, 94; 55-59, 90; 60-64, 86; 65-69, 80. Comparable indices of per capita productivity may be obtained by dividing the total population into the sum of the products of per cent employed x index of productivity in age group x number in age group. The result will vary somewhat according to the productivity and employability indices held to be representative for each age group relative to each other age group. For a different set of weights see W. S. Thompson and P. K. Whelpton, *Population Trends in the United States* (New York, 1933), p. 169.

A diminution in the ratio described under (a) will increase the difficulties involved in preserving a desired but changing balance among the numbers employed in various occupations. For the greater this ratio, the greater will be the extent to which the desired balance can be secured by distributing young and undifferentiated employés among the occupations expanding in relative importance; and the lower this ratio, the greater the extent to which the desired balance must be secured through shifting persons from occupations declining in relative importance to occupations increasing in relative importance. No great difficulty on this score should be experienced in France until after 1960. Let the index of new workers be 40 per cent of the age group 18-19 plus 60 per cent of the age group 20-24; that of the workers leaving employment, one-third of those aged 60-64 plus one-half of those aged 65-69: then for each 100 of the latter there were 187 of the former in 1935, and in 1960 and 1985 there will be 147 and 94.

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[9] The influence of a diminution in numbers upon employment is presented in mere outline here, inasmuch as we have treated it at greater length in some of the articles listed in note 1, particularly in the last. Relevant bibliography is there given.

When the employment capacity of given occupations shrinks at a greater rate than that at which persons in such occupations abandon them permanently because of death, age, and disability, the resulting excess of workers must either migrate into other occupations, accept reduced wages, or remain unemployed. The difference between the two indicated rates of contraction may be aggravated in two ways by a decline in numbers: (a) the coefficient of expansion in per capita demand for some given consumer's good or service may not be sufficient to counterbalance the diminution in the number of consumers occasioned by the combined effects of a diminution in population and of changes in tastes, income distribution, and prices charged for competing or complementary goods; (b) the so-called law of decelerating demand for producers' and/or durable goods may become more operative. In virtue of the technical relationship between the demand for consumers' goods and services and the demand for goods used to produce such goods or services, a given relative diminution in the total demand for the former will occasion a relatively greater diminution in the demand for the latter. (Note: we refer here to a diminution in the *total* demand for the former, not to a diminution in the *rate* of increase in the demand for the former. A sufficient decrease in population will cause the *total* demand to fall, regardless what be the value of the coefficient of expansion of *per capita* demand.)

Let us illustrate (b). Assume that the life of school desks is four years; that the index of demand for the services of school desks has stood at a level of 100 for some years; that the consequent index value of the annual output of school desks has stood at 25 for some years. If now the index of demand for the services of school desks falls (because of a diminution in population) at one point per year, the index of demand for school desks will fall one point below 25 in the initial year, and a further point each succeeding fourth year. In other words, in the years when the demand for desks actually falls, the rate of fall will be four times that occurring in the same year in the demand for the services of desks. If, for the sake of simplicity, we may attribute the decline in the demand for the services of desks to the diminution in population, it is evident that in certain years recruits will have to be obtained for the desk industry, and that in certain years there will be an excess of employés in this industry. The variation between excess and deficit will be even more pronounced in the industry wherein is manufactured the machinery used to create desks. In sum, then, other things being equal, regardless what be the rate of depreciation, or the number of removes between the finished good and the producers' good industry, when (if not before) total demand for the former falls (because the decline in numbers more than counterbalances any increase in per capita demand), more or less periodic excesses of workers will develop in industries supplying durable and/or producers' goods.

Whether or not the intensification of conditions (a) and (b) serves to increase the annual average percentage of employables who are without work, or without work in occupations wherein their marginal productivities are at a maximum, depends almost entirely upon the effects which the immediate results of this intensification exercise upon the anticipations of entrepreneurs. Should the recurrent excesses of employables in certain occupations, or the secular diminution in the total demand for certain classes of goods and services, intensify entrepreneurial pessimism with respect to the future and/or diminish the rate of pecuniary spending in various income classes, cyclical-depressive tendencies will be aggravated as in periods of long continued price-level declines. Moreover, in the absence of population growth, the up-push per time period of developing fixed-capital deficits will not be present in the same degree as in the past to initiate sustained recoveries. For these reasons, therefore, it is quite possible that a diminution in population may be accompanied by an increase in the relative amount of unemployment in general and/or in the relative number of persons engaged at work yielding less income per time period than could be obtained, given a better distribution of employables among occupations.[9a]

It does not follow of necessity, however, that the results just described must ensue. Changes in population totals can be forecast with a high degree of accuracy at least a decade in advance. Moreover, the rate of diminution is low. Between 1955 and 1985 the French population will decline but 24.5 per cent, according to Sauvy's forecasts; not until 1975-80 will the rate of decline slightly exceed one per cent per year. Since the rate of decline can be forecast with a high degree of accuracy, and since the influence of given decrements of decline upon demand totals is readily determinable, it should prove comparatively easy to adjust an economy to such rates of decline as will be experienced in France within the next fifty years. Moreover, should private enterprisers prove deficient in their performance of the tasks for which they reputedly are remunerated, collective entrepreneurship may prove equal to the fulfillment of these tasks. In sum, if a decline in numbers is accompanied by an increase in the relative amount of unemployment, this result cannot be viewed as a *necessary* concomitant of such a decline.

[9a] Several qualifications need to be kept in mind. First, other things equal, such excesses of workers as develop in durable and producers' goods industries in virtue of a decline in numbers are less intense, given a constant rate of decline in numbers and/or varying rates of capital depreciation than given an increasing rate of decline and/or an invariant rate of depreciation. Second, since the number available for employment in a given occupation, in the absence of new recruits, declines (through age, death, and incapacitation) more rapidly than the population total (which is fed by births), the number of workers available in most occupations, assuming no recruiting of new workers and other conditions constant, will decline more rapidly than the demand for their services. Whence it follows that some recruits will be required each year for most, if not all occupations. It follows further, therefore, that the major prerequisite to the preservation of full employment in a declining population consists not so much in the *redirection* of workers out of some occupations into other occupations as in the *direction* of new young workers and new nonhuman factors of production into various employments in proportions that, to remain appropriate, may be subject to frequent and even continuous change.

The *direction* of new workers into various employments in the appropriate proportions will serve to solve most of the problems connected with a decline in population and concomitant changes in age composition, even though, as we noted above, the relative number of persons entering employment for the first time (which relative number, though expressed above in terms of the ratio of the age group 18-24 to the age group 60-69, may be expressed simply and more accurately as the ratio of the number of persons aged 15-19 to the number aged 20-64) declines until the age composition becomes stable (assuming that fertility and mortality rates are such as to give rise to a stable age composition). Let P = total population; $e_1, e_2, \ldots e_n$ = the respective numbers engaged in each occupation; $d_1, d_2, \ldots d_n$ = the respective demands for workers engaged in occupations 1, 2, . . . n. If, because of a given decline in P, some demands (say $d_1, d_2, \ldots d_{10}$) diminish relatively more than P, the appropriate balance among all employments can be preserved in most instances by shifting some or all of the offspring of persons engaged in the relatively depressed occupations (i.e., $e_1, e_2, \ldots e_{10}$) into occupations experiencing a relatively smaller decline in demand (say $d_{11}, d_{12}, \ldots d_{20}$) than in number ($e_{11}, e_{12}, \ldots e_{20}$) which (assuming no variations from occupation to occupation in mortality and fertility rates) will decline, on demographic grounds, at the same rate as P. For a complete discussion of these points see last reference in note 1, above, and writer's forthcoming monograph on the economic consequences of a decline in population.

Unemployment will increase, given a declining population total, if necessary readjustments are not made in the relative rates of remuneration, or prices, asked by the owners of land, labor, or capital. A decline in numbers implies, other things equal, a decrease in the relative scarcity of land, old capital, and new mobile capital, and an increase in the relative scarcity of labor. It implies, therefore, rising *relative* wage levels and falling *relative* interest and rent levels. Whether *relative* interest levels fall sufficiently to permit full employment, other things equal, will depend upon whether or not banks and fiscal institutions insist upon charging the same prices for new pecuniary capital as they have been accustomed to charge in the past; and whether *relative* rent levels fall sufficiently will depend upon the extent to which the owners of property let under long time leases stand willing to readjust rent levels downward. Neither adjustment should prove impossible of accomplishment. Should the banking system as now organized in any country such as France fail to make the necessary downward adjustments in interest levels, the establishment of further collective control over this system will make such downward adjustments possible. Should rental levels not be sufficiently readjusted downward, either the resulting bankruptcies of lessees, or the application of differential tax rates to land will force rental levels downward. In general, since the rate of decline in population total will be very low at first, the nature of the requirements of the resulting economic situation may be learned at no great social cost, and the significant downward readjustments may be made in good time.

Lack of sufficiently comparable statistical data makes it difficult to corroborate the preceding arguments fully. Per capita industrial growth apparently did not proceed at as high a rate in pre-war France as in countries such as Germany, in large part because France was hampered by a relative lack of resources and technologically competent individuals.[10] Nevertheless, according to W. S. Thompson's careful statistical analysis of the relation between population growth and welfare in Great Britain and many countries in Continental Europe, the economic welfare of the masses improved more in France in the half-century preceding the World War than in the other lands, all of which showed much higher rates of population growth. Only in France was the "situation as a whole of the . . . people" comparatively good. Only in France had the condition of the working classes, as measured by real wages, continued to show improvement. Only in France did the records of migration and food production and consumption reveal a relaxation of population pressure. France

> is one country which stands in a class by itself. . . . The production of food in France has increased more rapidly than population since 1880, and . . . the food imported is also increasing more rapidly than the food exported. . . . On the whole, it is clear from comparing France with these other countries that the amount of food consumed per capita has increased more rapidly than in any other country, with the possible exception of the United States.[11]

France's relatively good situation with respect to food supply is traceable primarily to the fact that her population has grown so slowly, for the level of efficiency in French agriculture is low, as has been indicated in Chapter V. Crop yield per acre in France remains below that attained in Belgium, Holland, the United Kingdom, Germany, and Scandinavia.[12] The higher yield in these countries is obtained through a greater expenditure per acre and per unit of output either of labor, or of capital, or of both. The number of persons employed per 100 acres of crop land, while higher in France than in the United Kingdom, is much lower than in countries such as Germany and Italy.[13] Capital equipment, as measured in terms of work animals per 1,000 acres of crop land, is higher in France than in Italy, but lower than in Germany and England and countries employing similar methods. Output per worker in agriculture (and apparently in silviculture) in France is higher than in Italy, lower than in England, and (ignoring differences in capital used per acre) on about the same level as in Germany. However, were England and Germany to produce as large a proportion of their food supply as France, per capita output in these two countries would be depressed.[14] Two general conclusions follow. First, were French agriculture as efficient as German, and were as effective use made of capital equipment in French as in English and German agriculture, the yield per agricultural worker would be much higher in France than it is. Second, given the past and present level of agricultural efficiency in France, it is evident that had the French population grown as rapidly as the English and German, the yield per agricultural worker in France would have been much lower than it was;[15] and that, should the French population grow appreciably, the returns per French agricultural worker will not increase and may even fall.

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[10] Mr. Carl Snyder presents statistical data on comparative industrial growth by countries in a forthcoming book to be published by Macmillan Company.

[11] *Population: A Study in Malthusianism* (New York, 1915), pp. 121-22; see also pp. 122-29, 156-61.

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[12] *Agriculture Yearbook (1923)*, U.S.D.A. (Washington), p. 467; E. M. East, *Mankind at the Crossroads* (New York, 1926), p. 171.

[13] *Yearbook* (1923), pp. 475-76; J. D. Black, *Production Economics* (New York, 1926), p. 585. The amount of cultivated land per capita is higher in France than in West Europe (W. S. Thompson, *Danger Spots in World Population*, New York, 1929, p. 11).

[14] In 1925-29 France and Italy produced about 95 per cent of their staple food and fodder consumption; Great Britain, 51; Germany, 78. Only France and Italy could produce a sufficiency at home. See B. Emeny, *The Strategy of Raw Materials* (New York, 1934), pp. 172, 175. Before the World War domestic food production supported 72 per cent of the German population; 70 of the French; 64 of the Italian; 37 of the Belgian; 41 of the British. See East, *op. cit.*, pp. 70, 79.

[15] The observations in the text above are based on data in *Yearbook* (1923), pp. 467-76; J. A. Venn, *The Foundations of Agricultural Economics* (Cambridge, 1933), pp. 115-25; Royal Institute of International Affairs, *World Agriculture: An International Survey* (London, 1932).

The mineral supplies of France (including mineral-rich Alsace-Lorraine) render the French people perhaps the most mineral-wealthy in Europe, exclusive of Russia. France is or may become self-sufficient in iron ore, iron and steel, machinery, chemicals, coal, nitrate, aluminum, potash, and antimony. She enjoys a comparative abundance of gypsum, talc, and soapstone. Her per capita iron reserves are not only the greatest in Europe (exceeding by 50 per cent the British per capita supply), but are comparatively easy to work, output of iron ore per worker in France exceeding even the Swedish average. Output of metallic iron per worker is greater in France than in any country but Sweden. France's greatest industrial deficiencies consist in a relative lack of oil, copper, lead, zinc, sulphur, and minor metals such as manganese, nickel, chromite, tungsten, tin, and mica. She is deficient also in coking coal, and her coal production per worker is relatively low. Although this energy deficiency is partly compensated by water power (which provides about one-fifth as much energy in France as does coal) and by proximity to English coal exporting centers, daily per capita energy consumption is lower in France than in Scandinavia, Great Britain, Belgium, Germany, and Switzerland. Moreover, installed horsepower per worker is comparatively low in France. The data on mineral and energy production when taken in conjunction with the data on per capita income suggest: (a) that France is not securing as great a per capita income from her resources as they could be made to yield; (b) that her mineral and energy resources could temporarily support an increase in population; (c) that an increase in population would accelerate the rate at which her exhaustible resources are being used up.[16]

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[16] For comparable data on the mineral and energy supply situation in France see E. Zimmerman, *World Resources and World Industries* (New York, 1933), Part III; H. Decugis, *Le destin des races blanches* (Paris, 1936); C. K. Leith, *World Minerals and World Politics* (New York, 1931); W. S. Thompson, *Danger Spots*, p. 11; F. G. Tryon, *Reports* of Roundtables [on population], Harris Foundation Roundtables in 1929 (Chicago, 1929), III, 626-78; T. T. Read, *American Economic Review*, XXIII (1933), 58; Emeny, *op. cit.;* W. Y. Elliott, *International Control in the Non-Ferrous Metals* (New York, 1937).

The data on income and wage levels in France and other European countries indicate that since 1914 conditions have improved as much in France as in the more progressive European countries, with the possible exception of Netherlands and Scandinavia; that real per capita income remains lower in France than in a number of European countries, in part at least because of the lag in French technological progress. In 1913 per capita income was lower in France than in the United Kingdom, Netherlands, Germany, Switzerland, and Belgium, but higher than in the remaining countries of Europe.[17] Between about 1914 and about 1930 real wages in Great Britain rose about 14-17 per cent; in France, at least 20-25 per cent; in Germany prior to the depression, by a percentage equal to if not in excess of the British.[18] Nevertheless, about 1928, according to one study, real wages remained lower in France than in Great Britain, Holland, and apparently Germany and Scandinavia.[19] According to Clark, real income per occupied worker in France in 1925-34 was $694. The comparable figures for certain other countries follow: United States, $1,397; Great Britain, $1,069; Switzerland, $1,036; Netherlands, $885; Irish Free State, $770; Sweden, $695; Denmark, $680; Germany, $646; Spain, $628; Belgium, $600; Norway, $539; Czechoslovakia, $455; Poland, $352; Italy, $338; Bulgaria, $259; Rumania, $243. The relative position of France in terms of per capita income approximates her relative position in worker income.[20] It is evident, therefore, that per worker and per capita income in France, while higher than in most European lands, remains appreciably lower than in Great Britain, Netherlands, and Switzerland. Moreover, there is no reason to suppose that an increase in the population of France would tend to raise per capita income in France; on the contrary, its effect would probably be depressive.

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[17] S. Kuznets, *Encyclopaedia of the Social Sciences*, XI, 206; C. Clark, *Weltwirtschaftliches Archiv*, XLVII (1938), 67.

[18] W. Woytinsky, *Encyclopaedia of the Social Sciences*, XV, 307-10. For pertinent French data on wage movements and their causes see F. Simiand, *Le salaire. L'évolution sociale et la monnaie*, III (Paris, 1932).

[19] B. Ohlin, *Interregional and International Trade* (Cambridge, 1933), p. 274; also Social Science Research Council Bulletin No. 22, *International Wage Comparisons* (New York, 1932).

[20] For data on per worker income, see Clark, *op. cit.*, pp. 60, 66; on per capita income, Kuznets, *op. cit.*, p. 206.

The implications of our discussion in this section follow. First, if the level of efficiency were raised in French industry and agriculture, and if a lesser proportion of France's human and nonhuman resources were engaged in unproductive (e.g., military) and subsidized (e.g., tariff-protected) industries, the national and per capita income would be larger, and a larger population could be supported at the present income level. Second, inasmuch as a population of 42 millions in a country with the territory and resources of France is considerably in excess of the optimum, it follows that if the population were smaller (say 25 per cent) the level of per capita income would be greater, and it could be maintained at this greater level for a longer period of time. Third, although certain economic difficulties may be aggravated by a decline in population total, it should not prove exceedingly difficult to adapt the French economy to a decline in population total. Fourth, through observation of Malthus's counsel the French population freed itself in the nineteenth century of the population pressure which apparently was very pronounced in the late eighteenth and early nineteenth centuries.

II. Per Capita Output, Per Capita Income, and Per Capita Welfare

In the preceding section discussion has been confined to the main determinants of per capita output. In this section we shall treat the more important factors that govern the relation between per capita output and per capita welfare. It will be assumed that per capita pecuniary income will be high or low in proportion as per capita output is high or low; and that per capita pecuniary income is always being expended for goods or services that yield present income directly in the form of present consumer services, or indirectly in the form of the present belief that at some future date the investment or capital goods purchased now may be converted into consumer services. (For sake of simplicity that form of psychic income best described as "power over others," an inevitable correlate of the mere possession of investment or capital goods, will be ignored.) Real income will be understood to refer to the physio-psychic state of the individual in so far as that state is conditioned by the receipt of "present" and "future" goods and services; changes in real income will refer to changes in this physio-psychic state as conditioned by alterations in the amount of "present" and "future" goods received by the individual. Real income will therefore be expressed in terms of "welfare."

Given these distinctions and definitions, it may be said that the amount of "welfare" which a certain amount of pecuniary expenditure will yield at constant prices depends primarily upon the efficiency with which this sum is allocated among goods and services, and upon the culture-pattern within which the spender finds himself. The former condition is clearly recognized by Penrose in his definition of an *optimum* population.

> The per capita welfare optimum population for any area is that population in which per capita income stands at a maximum when it is spent in the consumption of the composite commodity that, in the light of existing scientific knowledge, makes a greater contribution to welfare than, in the existing state of the arts, can be made by any alternative composite commodity.[21]

This definition implies that, other things equal, per capita welfare will be high or low in proportion as consumers choose goods and services rationally and intelligently and in light of the best available scientific information relative to the prices of specific goods and services and to their comparative capacities to satisfy specific wants that are felt or ought to be felt. Presumably welfare, as defined by Penrose, will be great, other things equal, in proportion as information is amassed relative to the comparative capacities of specific goods to satisfy specific wants, and as such information is diffused through the population and acted upon.

Penrose's definition is inadequate for our purposes for two reasons: (a) it is not general enough in that it does not give sufficient weight to the influence of culture-patterns upon *how* given needs are satisfied; (b) it ignores the influence of the culture-pattern upon the *number* of needs that must be satisfied. Both the amount of welfare yielded by a given amount of pecuniary expenditure and the number of persons that can be supported on a given terrain are governed by this twofold influence of culture-patterns.

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[21] E. F. Penrose, *Population Theories and Their Application* (Stanford, 1934), p. 84.

The manner in which given needs are satisfied is conditioned in a very large degree by the culture-pattern, for most needs in theory may be satisfied in a number of ways. Only such needs as those for specific and prescribed types of medicine, medical service, and diets can be effectively satisfied in but one way. Needs such as those for nutrients, or for clothing and shelter, may be satisfied in a multiplicity of ways. The need for recreation may be satisfied in an even larger number of ways. Some modes of satisfying needs require large amounts of pecuniary expenditure; others require small amounts. The choice that will be made, however, will turn largely upon the type of culture-pattern under which the spender lives. The welfare of the spender will be greater, other things equal, in proportion as the money cost of satisfying given needs is low. (The level of fertility will depend, other things equal, as we note in the next section, upon the money cost of satisfying given needs. If this cost is high, fertility will be low; if this cost is low, fertility will be high.)

Were it possible to establish in the culture-pattern a more general principle of means-selection than that laid down by Penrose it would be possible, through the adjustment of consumer behavior to this principle, to increase the capacity of an area to support population at any stipulated level of per capita welfare, given either a large or a small number of needs. Let it be stipulated not only that the best composite commodity be selected, but that whenever one of several goods (say wheat or rice) is equally suited to be a component of the composite commodity, that good be selected which requires the least expenditure of direct and indirect labor per unit of capacity to satisfy need. Given consumption in accordance with this principle, and given as the desideratum a population of some specified size, that desideratum could be realized at a higher per capita level of welfare than could prevail, given consumption in accordance with some alternative principle.

The *number* of conduct-determining needs is variable, not constant. For needs are not only physiological and physio-psychical, but also psychical in nature. The number of needs in the last category will be greater or less depending upon the cultural situation in which an individual finds himself. In practice, therefore, conduct-determining needs range from the absolutely necessary to the factitious, and the factitious vary in relative number with the cultural situation. By factitious needs we mean all needs the satisfaction of which is unnecessary to the realization by the individual of the ends most stressed in and consistent with any cultural scheme of values. For example, if health and tone be an ultimate value in a cultural scheme of values, food, clothing, housing, etc., in excess of a stipulated physiologically necessary minimum are describable as factitious. If, on the contrary, the ultimate value is the maximization of emulative display and conspicuous consumption, then food, clothing, housing, etc., in excess of a stipulated physiologically necessary minimum are not factitious. In a mobile and industrial society such as is now found in Western Europe, the ratio of factitious to necessary needs will vary primarily with the coefficient of income distribution; it will be high when income is very unevenly distributed, and low when income is fairly evenly distributed. For many of the tastes of the lower income groups are acquired through observation of the consumer behavior of the higher income groups, and the consumption of the latter will deviate from the physically attainable community average in proportion as the percentage of community income received by the higher income groups is large. Conversely, in proportion as income is evenly distributed, the consumption pace that can be set by the recipients of supra-average incomes is reduced.

If the reasoning in the preceding paragraph is valid, a high correlation must exist between the coefficient of income distribution in a community and both the amount of welfare which a given expenditure of pecuniary income will yield and the number of births that will be found in a community with a given per capita income. If individual welfare is primarily a function of the degree of balance between the monetary value of needs felt per time period and the money available per time period for the satisfaction of felt needs, the amount of welfare obtainable for a given expenditure will vary inversely with inequality in income distribution. It will be high, given approximate equality; it will be low, given extreme inequality. If felt needs may be said to compete with procreation, and if an increase in felt needs (other things equal) may be said to diminish the tendency to procreate, it follows that the level of fertility will vary inversely with inequality in income distribution. For the more unequal the distribution of income, the greater will be the ratio of the money value of felt needs to the money sum available for their satisfaction; and the greater this ratio, the lower (other things equal) will be the level of fertility.[22]

From what has been said in this section both the capacity of pecuniary expenditure to yield welfare in France and the capacity of France to support population at stipulated levels of welfare (with her present resources and technology) may be increased in three ways: (1) by adapting the habits of consumers to the prescripts of scientists with respect to bodily needs; (2) by choosing from among equally applicable prescripts those involving the smallest expenditure of direct and indirect labor per unit of need satisfaction; (3) by reducing marked present-day inequalities in income distribution in France.

III. Determinants of Fertility Levels and Trends

Most of the writers whose theories have been referred to in the preceding chapters have attributed the decline in fertility in France and in other countries to the increasing influence of social conditions allegedly inimical to fertility (e.g., urbanization, education, occupational milieu, the level of income and its distribution, intensification of interclass mobility, etc.). These fertility-depressing conditions have affected the individual primarily through their effect upon the family, the institution whereon society depends for the biological replacement of its members. In a sense, then, it may be said that many French writers have implied a growing incongruity between the family as a system of arrangements designed to secure the replacement of a population and many of the institutions and practices which have come to exist alongside the family in the cultural pattern of France and other lands. Few have explicitly recognized this incongruity, however. Most of the French writers who have discussed the problem seem to have assumed, moreover, that a mild type of state interventionism will suffice to counterbalance factors conducive to relative infertility and to incongruity between the family as a reproductive system and other institutions dominating the present national culture-pattern of France. For reasons to be indicated, it seems that neither this explanation of the decline nor the remedy based thereon is adequate.

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[22] For the best complete treatment of the relation of consumption to welfare see C. C. Zimmerman, *Consumption and Standards of Living* (New York, 1936).

The level of fertility in a population living in a given physical environment is governed ultimately by the pattern of culture under which that population lives, and the direction of the longer-run trend in fertility (and in natural increase), if there be a trend, is dependent upon the changes that take place in the pattern of culture. For although the level of fertility in a given population is conditioned by the age, sex, and marital (and therefore by the age at which people marry) composition of that population, and in a minor degree (if at all) by the natural fecundity of that population, both these conditioning factors (the age, sex, and marital composition of the population and the degree of natural fecundity) and the attitude toward procreation of those legally entitled (i.e., usually, the married) to procreate will depend ultimately upon the kinds of motives to which the social milieus surrounding individuals give rise. And these milieus will be shaped predominantly by what may be called the general cultural pattern of a people. Whence it follows that whether or not the level of fertility of a people can be elevated or reduced by governmental action depends in the last analysis upon whether or not cultural patterns are susceptible of directed modification.

To the question implied in the last sentence certain writers have offered negative answers. These writers, exponents of cultural theories of the rise and fall of populations, assert that, because of the laws of change immanent in any all-inclusive cultural pattern or totality, the culture of a people (such as the French or any other Western nation) is subject to long-continued drifts with which attitudes toward fertility and fertility itself are closely associated. Thus, according to Spengler's morphological theory, depopulation becomes inevitable when a culture has evolved into its final megalopolitan stage; nor will population growth be resumed until a new culture replaces that which has died as it were of old age.[23] According to P. A. Sorokin, when a culture such as that of the French and the other Western peoples has assumed an "overripe sensate" form, depopulation is inevitable; nor, apparently, will population growth again take place until basic cultural trends have reversed themselves in the direction of the "ideational."[24] According to Marxian interpretations of historical trends, there are associated with the later stages of "capitalism" conditions increasingly inimical to fertility, conditions that will not be corrected until the present type of economic system is replaced by one socialistic in the Marxian sense. According to various students of primitive cultures, the impingement of the culture of a Western "master" people upon that of a "subdued" primitive people may undermine the latter's reproduction-favoring institutions and practices and yet establish no suitable substitutes. In theory all but the last of these explanations is applicable to France.

The cultural theories just referred to are open to criticism, as is the pessimistic conclusion based thereon, because they imply too great a fixity of relationship among the elements making up a culture-pattern, too great a nonmodifiability of such patterns, too predetermined immanent historical trends in a cultural totality, and too great an unawareness of social trends and their causes.[25] In other words, whether or not fertility will follow the trend indicated by cultural theories such as Spengler's or Sorokin's turns upon the intrinsic nature of culture-patterns as such, upon what elements are intrinsic constituents of a culture-pattern and what elements are not, upon the nature of the relationships among the intrinsic constituents of a culture-pattern, and upon the nature of the processes of change operative in these intrinsic constituents and in their relationships.

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[23] O. Spengler, *The Decline of the West* (New York, 1928), II, 102-07.

[24] This thesis, nowhere developed explicitly, permeates Sorokin's *Social Dynamics.*

Adequate consideration of these points makes necessary a more complete formulation of the proposition that fertility in a given physical environment[26] is a function of the pattern of culture. Thus stated the proposition is inadequate in the sense that the proposition, the effective demand for automobiles is a function of the total income of a community, is inadequate. In each instance only a blurred picture of the determinants is provided. Likewise it no more suffices to say that fertility is a function of some given element in a culture-pattern (e.g., the degree of urbanization) than it suffices to say that the demand for automobiles is a function of their price. In each instance the operation of other determinants is ignored. The demand for automobiles at any particular price is a function not only of this price but of the various prices at which given quantities of competing or complementary goods are being offered. The extent to which urbanism depresses fertility depends among other things upon the type of occupation pursued, the conditions of child care stipulated, and so on. In short, then, when it is said that fertility is a function of culture, it is implied that fertility is a function of the various elements that make up a pattern of culture, some of which are favorable to fertility, some of which are inimical to fertility, and some of which are without effect. In other words, if a pattern of culture consists of 100 distinct cultural elements labeled C_1 to C_{100}, the relationship between fertility $(= F)$ and culture may be described functionally: $F = \mathrm{f}\ (C_1, \ldots\ldots, C_{100})$.

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[25] It cannot be inferred that the modern cultural system will develop along predetermined lines analogous to those allegedly followed by ancient civilizations said to have "decayed." Today we possess both a vast amount of factual information and much knowledge of the nature of social processes *not known* to any other people that has "decayed." This information and knowledge constitute a new factor in the modern situation, a factor virtually ignored in treatises such as Spengler's, or Sorokin's, or Toynbee's (*Study of History*).

[26] Hereafter in this section it will be assumed that the physical environment within which the cultural pattern exists remains constant. It will be assumed also that the cultural pattern is a closed pattern in the sense that an economy is assumed to be closed. When the latter assumption is removed the impetus to change in a culture-pattern may come from the outside.

Given the validity of the statement, $F = \mathrm{f}\ (C_1, \ldots\ldots, C_{100})$, and given the assumption that each of the 100 cultural elements is absolutely independent of each other element, it is evident that fertility $(= F)$ can be increased by striking out each cultural element inimical thereto; it can be increased even more by substituting for the elements unfavorable to fertility elements favorable thereto. Whence it follows that the extent to which fertility can be increased or decreased at any particular time by the action of a governmental body, for example, depends upon: (a) the degree of independence of each cultural element with respect to each other cultural element; (b) the capacity of such a governmental body, given any particular condition (a), to eliminate cultural elements inimical to fertility, or to substitute for any such elements other elements favorable to fertility. It will be contended explicitly only that there is enough independence in the relations among the intrinsic constituents of a culture-pattern to permit an appreciable modification of the pattern as a whole in intended directions. It can but be assumed that an aggressive élite will frequently, if not always, possess the capacity to modify a culture-pattern along lines indicated under (b).[27]

It is necessary on practical grounds to assume that the fixity or lack of fixity in the intrinsic constituents of a culture-pattern and in their relations to one another can manifest itself only through time. It is necessary on grounds of logic to assume that a change in culture-pattern may have one or more of three origins: (a) adaptation of one intrinsic constituent to another; (b) modification, because of their internal nature, of intrinsic constituents of a culture-pattern; (c) metamorphosis, for reasons (a) or (b), of intrinsic constituents into elements not essential to a culture-pattern, or of elements not essential to a pattern into elements essential thereto. Origin (a) does not suffice to explain historical changes in culture patterns because, given only changes of this sort, history would reveal (assuming no non-culturally determined changes in physical environment) only either an ever closer approximation to a condition of nonchange (equilibrium), or the continual recurrence of a given pattern of change. Wherefore it is assumed that changes of types (b) and (c) also occur.

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[27] Inasmuch as it is highly probable that neither knowledge of methods of contraception nor recourse thereto can be stamped out, it will be assumed throughout the discussion that such methods are known and can be resorted to. Even assuming that such methods could be legislated out of existence, such legislation could be sanctioned only by proponents of human slavery and advocates of the destruction of all the liberties modern man enjoys in virtue of centuries of struggle.

What is of importance for the present discussion is not so much the propositions just laid down as the nature of the relationship among the elements composing a cultural pattern. This relationship is neither one of complete independence nor apparently one of complete dependence. Individual elements that seem to make up a cultural pattern are usually related to one or more other elements in such a way that a change in any one of these elements will produce a change in one or more other elements "functionally" related thereto, the actual degree of change in the latter being conditioned by whether or not other elements "functionally" or catalytically related to the latter are present. Any element not related to other elements in a functional or catalytic sense is not an intrinsic constituent of a culture-pattern. Of the elements that are functionally related some (e.g., those comprising what is called "material culture," or the "state of technology") at times are more prone to change continuously than others (e.g., legal prescriptions with respect to the relationships among members of a family). The main trends in a culture-pattern are primarily determined, therefore, by the changes occurring in the former class of elements which may be termed the "independent cultural variables." Changes in the latter class (i.e., in the "dependent cultural variables") therefore are essentially adaptive in nature, given the following provisos: (a) the relationship between any two variables is seldom if ever absolutely one-to-one in nature; (b) some of the change in some of the "dependent" variables is apparently autonomous, and some of the change in the "independent" variables is apparently adaptive; (c) the rate of change in any variable, be that change immanent in the variable or traceable to change in some other variable, will be conditioned by the actual state of the other variables present in the cultural pattern.

Given this description of the pattern of culture and of the nature of the processes of change operative therein, three questions remain to be answered before it can be said why fertility has fallen and whether or not fertility is susceptible of control: (a) What are the immediate causes of the decline in fertility? (b) With what specific cultural changes have these causes been associated? (c) Are these fertility-depressing cultural changes of such a nature that they can be neutralized, reversed, or met through a modification of dependent variables or through the introduction into the cultural pattern of elements hitherto not intrinsically parts thereof?

The immediate cause of the decline in fertility, given the present family system, must be sought in the alteration of the number and character of the external stimuli which impinge upon the individual in the various environments that make up the total medium in which he lives. For if one conceives of the individual as a responding mechanism capable of making only a comparatively fixed number of responses per time period, or of expending only a comparatively fixed amount of energy per time period, it follows that as the stimuli per time period increase in number and variety the individual will be compelled either to reduce the quantum of response made to any given quantum of stimuli or to fail to respond to certain groups of stimuli. Even though it be granted that the sensitivity of given persons to given stimuli at any moment of time is conditioned by their preceding history, or series of life experiences,[28] it nevertheless follows that a secular increase in the number and variety of stimuli will have the general effect indicated. On a priori grounds, therefore, one would expect, given an increase in the number and variety of stimuli in general unaccompanied by a corresponding increase in the number and variety of stimuli conducive to procreation and childrearing, a diminution of the quantum of energy expended in reproduction and childrearing and an augmentation of the quantum of energy expended in types of behavior that compete with the types involved in reproduction and childrearing.[29]

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[28] The role of past life history as a determiner of the individual's present behavior must not be underrated, however. "What makes some physical thing or trait a stimulus is the condition of the whole organism at the time, its

The thesis laid down in the preceding paragraph is subject to one qualification, however, namely, that responding behavior is conditioned in part by the general cultural medium in which the individual lives. Responses to given stimuli are not absolutely independent of each other; they often occur in patterns or configurations which are determined very largely by the cultural medium in which the human organism exists. Thus complete response to an initial stimulus to purchase a certain good *a* frequently involves further responses to *a* that assume the form of purchases of complementary goods *b*, *c*, *d*—goods complementary not because of their intrinsic nature but because of the patterns imposed upon consumption by the prevailing cultural medium. Response to a stimulus to reproduce tends to precipitate a series of complementary responses made necessary by the prevailing cultural medium. Whence it follows that given changes in a cultural medium will increase or decrease the probability of an individual's making a response to some given stimulus.

Applying to the problem of fertility levels per se what has been said concerning cultural change and responding behavior, we find two facts evident: (a) for at least 150 years changes in technological culture, the chief "prime mover" during this

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needs and the kind of behavior in which it is already engaged. And both of these things are longitudinal, historical; they include factors formed in previous life history." See John Dewey, *Philosophy and Civilization* (New York, 1931), p. 310.

[29] The thesis developed above may be built upon the Weber-Fechner law. Concerning this law see C. C. Zimmerman, *Consumption* . . . , pp. 36 ff.; G. Murphy, *An Historical Introduction to Modern Psychology* (New York, 1930), pp. 79-94.

period,[30] have multiplied the number and variety of stimuli impinging upon most men and have produced changes in many relatively dependent cultural elements which (changes) have reinforced or aggravated the impingement of these ever more numerous and varied stimuli; (b) there has been associated with the change in technological culture not an increase in the number and variety of stimuli to reproduce, nor an increasingly simple reconfiguration of the complementary responses entailed by an initial response to a stimulus to reproduce, but instead merely a growing complexity of the latter configuration.

Under (a) we find the following: (1) a steady growth in the number and variety of goods and services accessible to individuals with the price; (2) a secular dissolution of the barriers to interclass mobility, a breakdown traceable both to the spread of the money economy[31] (which also has influenced conditions [5], [7], and [8] below) and to the labor and market requirements of modern technology and the types of education essential to the utilization of this evolving technology; (3) a secular shift of the population into urban and occupational milieus where the frequency of stimuli to consume is much greater than in rural and extractive-occupational milieus;[32] (4) changes in the distribution of income that increase the pressure upon the lower income classes to emulate the supra-necessity consumption of the higher income classes; (5) a system of economic and social selection and rewards inimical to economic and social achievement on part of individuals who assume the obligations of parenthood, particularly on part of those who frequently assume these obligations; (6) a growing awareness of economic insecurity, if not an increase of economic insecurity itself; (7) an orientation of the individual away from the home and the family unaccompanied, however, by an integration of the individual with extra-family milieus so complete and intense as that which in the past characterized his orientation toward the home and the family; (8) the (temporary?) substitution of tenuous ties between the individual and the groups of which he is a member for the tensile connectives which formerly attached an individual to social groups such as the church or family; (9) a diminution, as the result of changes (7) and (8), in the consciously felt satisfactions which living as living yields.[33] The rise of the nine sets of conditions described has been accompanied by a dissolution of the social controls which formerly impelled women to bear children (e.g., public opinion; law; magico-religious beliefs; social and educational tabus, bugaboos, and illusions; artistic ideals; the comparative social esteem in which various types of women are held); it has not been accompanied as yet by the development of new sources of motivation to reproduction.[34]

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[30] For a defense of the view that changes in technology have set the pace see A. P. Herman, *American Journal of Sociology*, XLIII (1937), 440-51. See also the qualifications noted by A. H. Hansen, *Quarterly Journal of Economics*, XXXVI (1921-22), 72-82.

[31] Money, as Simmel has shown, atomizes "the mental life of the individual" and individualizes "the different spheres within the individual." Within a money economy the individual is relatively independent of the immediate interests of his group and even of his immediate associates. Whereas an association such as the medieval corporation embraced the whole of an individual's personality, an analogous modern association engages only a small part of his personality, only a money participation on his part. The rise of the money economy has been accompanied, moreover, by a steady increase in the tendency of the individual to deal with the problems of daily life, with the choice of ends and of means to given ends, in terms of rational, mathematical calculations. See N. J. Spykman, *The Social Theory of Georg Simmel* (Chicago, 1925), pp. 230-36. It requires to be noted, however, that while the introduction of a money economy strengthened the processes described, the specific influences of the use of the elements comprising a money economy are conditioned by other types of institutional arrangements within the cultural milieu of a money economy.

[32] The influence of changes in occupational composition has been great even though such data as have been presented have not sharply portrayed the effects of such changes. "Occupations determine the fundamental modes of activity, and hence control the formation and use of habits. . . . Occupations

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determine the chief modes of satisfaction, the standards of success and failure. . . . The group of occupational activities . . . affords the scheme or pattern of the structural organization of mental traits. Occupations integrate special elements into a functioning whole." See John Dewey, *Philosophy and Civilization*, p. 175.

[33] On this point see T. N. Whitehead, *Leadership in a Free Society* (Cambridge, 1936), pp. 231-59. The individual is so constructed biologically that he requires a minimum of close integration with certain groups if he is to enjoy complete psycho-physical health. This minimum apparently is not possible as yet in a modern society such as the American, judging from the increased frequency of psychical ailments, certain types of criminality, certain types of popular amusements, and so on. Presumably fertility will be less in communities where this minimum is not attainable, in communities where social life is atomistic rather than integrated.

[34] On these social controls see L. S. Hollingsworth, *American Journal of Sociology*, XXII (1916-17), 19-29.

Under (b) we find, in part for reasons already stated under (a), a secular growth in the number of responses that must be made by those who have made an initial response to a stimulus to reproduce. For since the child becomes a member of society not primarily in virtue of its membership in the family but in virtue of the parents' capacity to fit the child into a mobile and competitive community wherein family counts for little, the task of making felt social provision for the child is much more difficult than formerly or than in a simple agricultural society. This task is rendered even more difficult, moreover, by the fact that extra-familial social pressure makes it necessary for parents to provide the child with supra-necessity services which, in a familial system, are provided either by the child or not at all. Wherefore married couples already find within the family system little motivation to reproduce and, assuming fuller adjustment of familial life to the conditions described under (a), will find even less in the future.

Granting the validity of the cultural theory developed in this section, two conclusions follow with respect to the French policies to stimulate natality. First, as Glass and others have shown and as we have indicated in Chapter X, the French policies have proved inadequate because they have effected no appreciable modification of those elements in the cultural pattern which are responsible for the decline. Second, whether or not the level of fertility can be elevated depends upon whether one of the following conditions can be realized: (a) a reversal of present technological trends and a concomitant restoration of a simple stable agricultural economy and the familistic system associated therewith; (b) adaptation of the family as a reproductive system to the cultural conditions associated with present-day technology; (c) development of a new set of arrangements for the replacement of the population.

Of the three conditions stipulated, (a) seems most unlikely of realization. The set of cultural elements composing that segment of culture here called technological seems to be too determining and independent in character to be reversed. Yet it must be reversed if a full-bodied back-to-the-land movement is to be carried out. Moreover, granting that such a movement could be effected, its effectuation would involve a rejection of many values deemed consequential even in totalitarian states and a destruction of the technological conditions prerequisite to the realization of the endorsed aims of totalitarian and democratic governments.

With respect to (b) it may be said that the rehabilitation of the family as an institution equal to the task of replacing the population is impossible, given the present cultural milieu and given no adequate pecuniary compensation of parents. The technological revolution of the past century has been accompanied by a progressive reduction in the number of functions performed by the family and by the partial dissolution of its structure. Today the family serves only as a source of intimate affection and as the social instrument through which the physical reproduction and maintenance of new members of society are secured. Under the impact of the concomitants of technological change, however, the motivation to reproduce and maintain the population is steadily declining. The formerly operative tabus, beliefs, senses of duty, and so on are no longer effective. Nor is there any possibility that they can be revived through the restoration to the family of its lost functions. These can be restored only under condition (a) which has already been rejected as improbable. The only motivation to procreation (other than factors whose birth-stimulating influence is diminishing) is pecuniary compensation of parents both directly in the form of monetary aids and indirectly in the form of nurseries, schools for all ages, medical aids, and so on. Accordingly, whether or not the family as it now exists will remain the primary population-replacing institution will depend upon whether, given that institution as it now stands, and given the anti-fertility stimuli to which individuals are now subject, the state can afford to provide adequate direct and indirect pecuniary stimuli to reproduction and maintenance within the framework of the familial system.[35]

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[35] See Kingsley Davis's excellent analysis of the structural dissolution of the family in *Sociological Review,* XXIX (1937), 289-99.

The actual annual cost of replacing the French population must approximate at least $2.7 billions, assuming a level of mortality requiring as a counterbalance 800,000 births per year. Inasmuch as this estimate includes nothing in the form of remuneration for the mother and apparently very little in the form of emulative and factitious expenditures on children, the estimate is probably too low rather than too high.[36] Even assuming that employment is stabilized at a high level in France (say, constant employment of at least 90 per cent of all employables), this annual cost of replacing the French population (i.e., $2.7 billions) approximates between one-third and one-fourth of the present French national income; it exceeds by about one-half the average annual ordinary expenditures of the French national government and amounts to about twenty times the present outlay on children in the form of birth bonuses and aids and family allowances.

Given present mortality and fertility, the French people are apparently paying out annually somewhat less than $2.7 billions, judging from the deficit of births and assuming no allowance for emulative expenditures. Moreover, the bulk of the present annual outlay for reproduction is being made voluntarily by French parents. However, in proportion as fertility-depressants become more operative in the future, and as potential parents increasingly refuse to utilize portions of their incomes to support the cost of replacing the population, the state will be compelled to remunerate in an increasing degree those upon whom the task of replacing the population falls. The revenue out of which parents will be remunerated will have to be raised through taxes on what we shall here call surplus income, or "surplus value."[37] Inasmuch as such a system of taxation will reduce inequalities in income distribution and diminish social pressure upon families and individuals to purchase factitious and emulative goods and services, the pecuniary stimuli to procreation may finally prove sufficient to induce French families to replace the population. If so, the family will persist as the accepted system of arrangements for the physical reproduction and maintenance of the new members of the population. If, however, only the lowest social strata respond to the pecuniary inducements, efforts are certain to be made to establish a new set of arrangements designed to insure reproduction among the fit at a cost per child within the means of the French state.[38]

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[36] With 800,000 births per annum, the number of children ranging in age from 0 to 18 years would approximate, let us say, 11.9 millions. Allowing for those who die, the average cost per year of raising a child to the age of 18, exclusive of remuneration for the services of the mother, will probably equal if not exceed $225. The product of this figure applied to 11.9 millions of children 0-18 years old is 2.7 billions. In the United States it cost about 1930, according to L. I. Dublin and A. J. Lotka (*Money Value of Man*, New York, 1930, chap. iii), approximately $10,000 to raise a child to the age of 18, allowance being made for wastage due to premature death but not for the labor of the mother and the outlay for education provided by the community. Since wages and per capita income are but one-half to one-third as high in France as in the United States, this figure has been reduced to $3,825, or $225 per year, and these sums have been assumed also to cover the cost of providing education. For French income and budgetary data see R. M. Haig, *Proceedings of the Academy of Political Science*, XVII (1938), 430-39; S. Kuznets, *Encyclopaedia of the Social Sciences*, XI, 206; C. Clark, *Weltwirtschaftliches Archiv*, XLVII (1938), 60.

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[37] The term "surplus value" is here used to define that part of any individual's income not necessary to induce him to perform for society those services that he customarily renders to society. For example, given a perfectly or an imperfectly competitive system, human and other factors will be priced according to their relative scarcity, this scarcity itself being a function of the distribution of income. Many human factors will receive greater sums than are necessary even in an emulative society to induce them to render such services as they render. Were the state to take this excess, employ part of it in the creation of capital and part of it in the provision of free services to the population, a new income distribution would be established. Some surplus value would remain. But through successive tax adjustments and absorptions of this surplus value successive and closer approximations would be made to a type of income distribution free of any "surplus value." On this question see article by the present writer, *American Political Science Review*, XXXI (1937), 41-42; C. B. Hoover, *Dictators and Democracies* (New York, 1937), chap. iv.

[38] The analysis thus far presented, if valid, indicates that the comprehensive set of policies put into effect in Germany to increase natality and improve the hereditary quality of the population will fail despite the initial increase in natality which these policies (particularly the suppression of abortion) have brought about. The increasing orientation of the individual away from the family and toward state institutions in Germany will serve also to undermine the family as the institution for the reproduction and the maintenance of the population. It is possible, however, that the German policies will evolve along lines indicated below, given which evolution it is possible that such policies may serve to maintain and perhaps even to increase the population. On German policies see Glass, *op. cit.;* articles by A. Meusel in *Sociological Review*, XXVIII (1936); F. H. Hankins, *American Journal of Sociology*, XLII (1937), 630-52; F. H. Hankins and C. Kirkpatrick, *ibid.*, XLIII, 122-26; P. K. Whelpton, *ibid.*, XLI (1935), 299-313; F. Burgdörfer, *Revue économique internationale* (June, 1935), pp. 483-99.

Should the family as it now stands prove unequal to the task of replacing the population of France, pressure to modify the present-day family will develop. There is even some probability that efforts to adapt the family to the task of replacing the population may result in the transfer of an increasing proportion of this task to specialists responsible for the bearing and/or rearing of children. The appropriation for the remuneration of parents of ever larger sums obtained through the taxation of "surplus value" will have several effects. The pressure to emulative expenditure will be reduced in so far as such pressure has its origin in the French income structure and not in foreign influences. The poorest and presumably least efficient social classes may prove most responsive to the pecuniary stimuli to parenthood. Many able families which would have supplied children even in the absence of pecuniary stimuli will now insist upon such stimuli. Wherefore the state will face on the one hand an intensification of dysgenic selection, and on the other, the need to divert an ever increasing proportion of the nation's current income to the support of race replacement. Hence social pressure will develop both to limit such compensation and the right to reproduce to healthy and comparatively able families and to reorganize childrearing institutions (hospitals, nurseries, provisions for habitation and recreation, medical care, etc.) in ways conducive to the reduction of the direct and alternative costs per child per year to a minimum.

The first of these pressures will gradually result in the restriction of the right to remuneration for bearing children to women who can meet at least minimum health and genetic requirements. The second of these pressures will tend to give rise to a set of institutions and arrangements for childrearing, operated on a large enough scale to reduce the direct and indirect cost per child to a level lower than can be achieved in the family system which at present is essentially uneconomic, measured in terms of cost per unit of output. The ratio of the number of persons actively engaged in childrearing to one thousand children will be reduced, with the result that a larger proportion of the adult population will be freed to participate in the production of other goods and services.

The second of these pressures may have one of two possible outcomes. The family may be freed of many or all the burdens associated with childrearing. The family would then serve primarily as a source of intimate affection and reproduction. Should parents not care to assume any of the burdens of childrearing or to reproduce on a familial basis, the actual task of bearing children may be turned over to selected women who perform this function under state auspices and in exchange for stipulated remuneration. Given the latter outcome, the family as it now stands will have been superseded by a new set of arrangements.

> A new kind of reproductive organization compatible with modern society would have been substituted for the family. The only vestige of the latter would be informal marriage and an occasional couple who, with permission of the state, wanted to have a child of their own, at their own expense.[39]

Our earlier rough estimate of the annual cost of replacing French population included no allowance either for the mother's bearing the child or for her subsequent care of the child. In view of the average per worker income in France, $500-$1,000, and probably more, will eventually have to be paid to French women for the task of bearing children. If the average per annum cost of rearing children can be kept to the $225 per year per child, as supposed above, the resulting annual cost of $2.7 billions will be swelled to $3.1-3.5 billions, given 800,000 births per year and a per mother remuneration of $500-$1,000. If French mortality were reduced to a level requiring but 700,000 births per year to replace a population of 42 millions (i.e., to approximate parity with mortality among American whites in 1929-31), the annual cost of maintaining the population to the age of 18 would be reduced to about $2.5 billions, and annual remuneration of mothers giving birth to $350-700 millions.

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[39] See K. Davis, *op. cit.*, p. 304, who has outlined a possible course of familial evolution along the lines traced above; see also article by the present writer in *Scribner's Magazine*, XCII (1932), 6-12.

The total per annum cost would approximate $2.85-3.2 billions. The net cost to France of replacing her population would total less than the above sums if under the new arrangements a larger proportion of the female population were made available to industry and commerce and agriculture.

When expressed in statistical terms the actual burden of replacing the population does not appear heavy. If the task of replacing the population were borne in entirety by two-thirds of all French women aged 17½-35 years, each woman in this age group would need to bear a child only once each 4⅜ years on an average; if the task were performed by two-thirds of the women aged 17½-29 years, each would need to bear one child every 3⅛ years.[40]

In view of the data we have already presented on the economic productive capacity of the French population as of 1960 and of 1985, it should prove fairly easy to restore French population growth to the level necessary for the replacement of a population of 42 millions, provided that adequate measures are adopted within the next forty years. Should French fertility and mortality decline in accordance with M. Sauvy's most likely hypothesis,[41] France's population will number 39.3 millions in 1955, 29.6 in 1985, or 6.2 and 29.3 per cent less than in 1936. Assuming that two-thirds of the women aged 17½-34 will bear the necessary number of children (assumed to be 800,000), then if fertility is placed on this basis beginning in 1955, one woman in each five of the designated childbearers will have to bear a child in 1955, the relative number rising to one in three by 1973 when the females born in 1955 will just be entering the childbearing category. If, however, fertility falls as Sauvy forecasts until 1985, in that year one in 2⅜ of the designated childbearers will have to bear a child, the relative number rising to about one in 1¼ seventeen years later. If, however, mortality falls and life expectancy at birth rises to about 60, and the required number of births to yield a population of 42 millions drops to 700,000, the frequency of childbearing among the childbearers need be only seven-eighths of that supposed above. It is evident, therefore, that if French fertility is to be raised to a replacement level, the necessary steps should be taken not later than 1970 or 1975. Otherwise the burden will prove unduly great unless the number of qualified childbearers can be increased by recruiting some aged more than 34 years and some among the excluded third in the age group 17½-34.[42]

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[40] In 1931 the French population included approximately 5.3 millions of women aged 17.5-34 years; 3.82 millions aged 17.5-29 years. Two-thirds of these respective numbers approximate 3.5 and 2.54 millions. If 800,000 births suffice, then ignoring plural births, one in each 4⅜, or one in each 3⅛ women must produce a child each year. While the figures in a stationary population based on present mortality would yield slightly different averages, the difference is very small.

[41] See *J.S.S.P.* (June, 1937), p. 233. No net migration is assumed.

We have sought in this section to present what seems to be a sound all-inclusive explanation of the decline in fertility and to indicate why it is very unlikely that the French population can be maintained by pecuniary measures, given no change in the family system and in the income structure. We have indicated, further, that the use of pecuniary stimuli to fertility may result in the development of a new set of arrangements to secure the replacement of the population. Whether such a system will evolve, or how soon it may evolve, it is impossible to say. In proportion as the French population begins to decrease because of the diminution in fertility and the drying up of sources of immigration, alarm at the trends under way will increase and press the state to take desperate measures, perhaps when the French population has declined to three-fourths of its present level. If measures such as have been indicated are not taken, the French people will steadily diminish and become increasingly vulnerable to a merger with immigrants from Italy and Southeastern Europe. If such measures are not taken within the next fifty years the task of replacing the *present* French population will prove exceedingly difficult. If it is decided about 1985 to stabilize the population at a level of 30 millions, a level then requiring about 500,000 births per annum, the effectuation of the measures described will permit the achievement of this level and of the higher per capita income which it ultimately involves (if, of course, France has not meanwhile fallen prey to foreign invaders).

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[42] According to Sauvy's forecasts, the French population should include at least 6 million women aged 17½-34 in 1955; 4 in 1970; 2.93 in 1985; 1.69 in 2000.

IV. Contradictions in Demographic Policy in Need of Resolution

French experience clearly supports the view that in the absence of state intervention population will not assume the size consonant with whatever set of communal ends is generally subscribed to by the population. This lack of consonance is traceable primarily to the fact that in a completely free enterprise economy it is apparently impossible, even given a tax system with regulatory as well as mere money-raising features, to establish such a set of relationships among the individuals composing that economy as will assure to each reward or punishment in proportion to his contribution to, or subtraction from, the sum total of communal welfare. Nor is it likely that a correlation of unity between reward and social usefulness will ever be established in any type of economy. Nevertheless, given certain social readjustments in inter-individual relationships, the correlation between usefulness and reward would be higher than it is under present circumstances.[43]

If it is granted that the state must intervene to establish the *right* density of population—and this sort of intervention is inevitable—it is essential that certain contradictions implicit in any demographic policy to be recognized. These contradictions are of three main sorts: (a) that between welfare and numbers; (b) that between present and future generations; (c) that between social groups composing the economy. Other contradictions, such as that between preserving and not preserving the family, or that between accepting the dicta of a religious group such as the Roman Catholic Church or the contrary dicta of an opposed group, must be subsumed under the three main headings.

Independently of the manner in which the three specified contradictions are resolved, it is highly probable that the welfare of the French people will vary in direct proportion to their dependence upon natural increase rather than upon immigration. Such immigrants as France will be able to introduce in the future will come primarily from the most "backward" nations and classes in Europe. What is more important, the cultural homogeneity of the French people will be weakened by a continuation of the immigrant influx, particularly by the influx of immigrants from any of the totalitarian or quasi-totalitarian states which oppose the assimilation of their emigrants by France or any other country into which they move. In proportion as the cultural homogeneity of the French people is weakened, their capacity for united action and their ability to utilize their resources will be weakened.[44] Whence it follows that the addition of a given increment of natural increase to the French population will exercise less of a depressive effect upon the level of per capita income and welfare over a period of time than will a corresponding increment of foreign immigration.

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[43] On these points see article by the writer in *International Journal of Ethics*, XLIV (1934), 313-31.

Of the three contradictions, that between social groups in an economy is most fundamental, particularly in countries now engaged in collective efforts to shape the course of demographic evolution. Given the present class structure of French society and present demographic policies, an increase in numbers, whether the product of immigration or of natural increase, will affect the money incomes of the members of different social and income groups in different ways. For the relative scarcity of the factors in virtue of the ownership of which income is received will be altered. An increase in numbers will weaken the tendency of wage levels to rise and may even depress wage levels; a diminution in numbers apparently will have the opposite effect. Conversely, an increase in numbers will tend to elevate interest and rent levels; a decline will tend to depress interest and rent levels. In other words, an increase in numbers will tend to depress income earned through labor and to raise property incomes; a diminution will tend to have the opposite effect. Wherefore, since different groups obtain their incomes in different proportions from labor and property, either an increase or a decrease in numbers will affect differently the various classes composing the French population.

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[44] For supporting evidence see C. D. Snyder, *Scientific Monthly* (March, 1938), pp. 261-67.

Accordingly, since the proponents of pro-populationist programs propose no significant alteration of the class and income structure of French society, and since these proponents seem to belong largely to the propertied classes, it is evident that a pronounced class bias permeates the present French pro-populationist program. This bias is quite evident in the policies that have been effected to date, and in the arguments offered in support of such policies. First, a large proportion of the funds employed to stimulate natality has come out of the pockets of French wage earners. Secondly, the economic arguments in favor of numbers run in such terms of anti-worker bias as "adequate labor supply," "stimulation of industry," etc. Thirdly, the military arguments are essentially disguised "cannon fodder" arguments; they ignore the growing importance of nonhuman equipment in warfare[45] and the fact that with perhaps one exception European countries must depend upon alliances for security against military onslaught. Fourth, the so-called cultural and political advantages of a large population at present redound only to the benefit of the haute bourgeoisie and groups permeated by the ideology of the nobility. Finally, the political philosophy of the pro-populationists is in substance fascistic. It conceives of the common man as an organism essentially subservient to the "welfare" of the "state" or "nation." It rejects most of the personalistic and individualistic values which came to the fore in the century preceding the World War. This "state," as now organized, is not a true collectivity but an instrument controlled by certain cliques; the "welfare" of the present

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[45] Colonel J. F. C. Fuller writes: "The theory of conscription . . . is today growing out of date. . . . The fighting armies of the future will be voluntary, highly professional and highly paid, consequently, comparatively small; this is the whole tendency of present-day military evolution." See article, "Conscription," in *Encyclopaedia Britannica* (14th ed., New York, 1936), VI, 284. Captain B. H. Liddell Hart believes that large, conscript mass armies will prove nonutilizable in war. "If the maintenance of such [mass] armies is straining the resources of the nations in peace, in war the attempt to use them threatents national bankruptcy." See article, "Warfare," in *1938 Britannica Book of the Year* (Chicago, 1938), p. 712.

French "state" is primarily the "welfare" of these cliques, not the "welfare" of the common man or of the masses.

If the "surplus value" associated with the differential scarcity of factors of production were taxed along lines suggested in the preceding section, and if this "surplus value" were used to stimulate fertility, variations in the incidence of the effects of population growth upon different individuals and classes would be eliminated. Nevertheless, the contradictions with respect to numbers and welfare and to present and future generations would remain. As we have indicated in the first two sections, France's capacity to support population at a higher level of per capita welfare is susceptible of increase. This capacity is subject to limitations, however. Moreover, assuming that the minimum level of physiological and physio-psychical needs is definitely determined, it may be discovered that such a minimum cannot be supplied given the present or some greater French population. If so, and if the ultimate desideratum is the maximization of per capita physiological and physio-psychical welfare, it will be incumbent upon the state to divert some of the taxed "surplus value" from the support of reproduction to the provision of the lacking needs.

The most primary function of the state, in the ideal sense, is the making provision for needs that transcend the individual because of the incidence either of the costs entailed or of the benefits yielded. Typical of this function is any policy carried out in whole or in part for the benefit of future generations. In so far as demography is concerned, present-day population policies may affect the lot of future generations in one or more of three ways. First, the larger the present population and present income, the smaller, other things equal, will be the supply of exhaustible resources left to future generations. Second, the more pronounced the decline in numbers that is permitted to take place, the heavier will be the initial cost of restoring the population to some given higher level. Third, the more pronouncedly dysgenic present-day reproductive selection, the lower will be income in the future generations and the less will be the capacity of such generations to deal with either individual or collective problems. The necessity of choosing with respect to the present and the future generation will always be involved in any state demographic program.

Of the three contradictions described, that involved in the varying incidence by class of the effects of population growth is by far the most important and the most in need of solution at present. It may be said, in fact, that the demographic and the socio-economic future of France will turn upon the manner in which this contradiction is resolved. For since the absorption through taxation of part of the "surplus value" of the higher income classes will destroy much if not all of their political and economic power, they will resist such a policy and this resistance may intensify the class struggle. Moreover, assuming that in theory the higher income classes were willing to sacrifice much of their "surplus value" on demographic grounds, they would have no assurance either that the "surplus value" would continue to be used for this purpose, or that the redistribution of economic power associated with such sacrifice would not diminish the total productivity of the country. Wherefore it is likely that in France the "struggle for population" will become intertwined with the present "class struggle" and that the two will have to be solved together.

V. Summary

Six conclusions are suggested by the discussion in the preceding sections. First, while personal happiness and welfare are not wholly dependent upon the level of per capita income, they are dependent thereon in an appreciable degree, particularly in a country wherein income is as low as in France. Second, the economic welfare of the French masses will tend to be benefited by either a complete cessation of population growth or a limited diminution of the population. Thirdly, present efforts to stimulate population growth in France are essentially the efforts of groups whose economic and social interests run counter to those of the French masses. Fourth, in the absence of a profound change in the income and social structure of France, a change likely to be favored by efforts both to stimulate natality and to adapt the French economy to a falling population total, measures to stimulate French population growth are bound to fail. Fifth, the "struggle for population" may become integrated with the class struggle now under way in France and may be resolved in the course of the resolution of the latter (and at present) more important struggle. Sixth, in the absence of a sane fact-implemented consideration of social ends and demographic means, France is unlikely for decades to "solve" the population problem.

CHAPTER XII

POSTLUDE
1936–1976

In a country with too low a birth-rate, like France, the State should doubtless encourage the increase of population . . . . Europe is overpopulated. . . . Let Venus have her way, and she will bring you Mars. Henri Bergson, in *The Two Sources of Morality and Religion* (1932).

I. The Redistribution of World Politico-economic Power

Since World War II a remarkable international redistribution of power has occurred, neither purely economic nor purely political, but an amalgam of these two forms of power. This redistributive process had its beginnings in August, 1914, when World War I, the first Modern Peloponnesian War, began, a war each major participant had counted on being short and successful.[1] There had been no lack of evidence that a redistributive process would be set in motion. This was apparent in the cumulating social and political instability flowing out of a century of unprecedented technological progress,[2] epitomized in 1904 by Henry Adams's "Dynamic Theory of History" and "Law of Acceleration,"[3] and perhaps sensed by Rudyard Kipling when, in his famous "Recessional," prepared for Queen Victoria's Jubilee in 1897, he foresaw the end of Britain's (and by implication, Europe's) world-wide political and economic hegemony.[4] Four years of world war produced about ten million military and war-connected civilian deaths in Western and Central Europe but failed to generate political and economic stability.

The second Modern Peloponnesian War, World War II, 1939–1945, completed the destruction of world-wide European political hegemony—in particular, that of France and the United Kingdom—and sundered Europe itself into two political and ideological subcontinents, one dominated by communist and the other by noncommunist powers. This war, though productive of much more mortality than was World War I, inflicted smaller losses in France in terms of military and war-connected mortality and births prevented than did World War I.[5]

The decline in European hegemony had its origin in some measure as well in the accelerated growth both of population and of an educated elite in less developed countries, especially among components of the large British and French empires. Crude birth rates, although less refined than fertility rates, may serve to illustrate trends until recently. The birth rate in less developed regions remained as high as it was in the eighteenth century—around 40–41; meanwhile that in more developed regions as a whole began to decline in or shortly after the 19th century, falling from about 38–39 in 1750–1900 to 34 in 1900–1910, to about 27 in 1910–30, and about 21 in 1930–50. Until 1920, however, the death rates in less developed regions remained about as high as they had been in 1750–1800 while those in developed regions steadily declined; the rate for the whole of the developed world fell from about 34 in 1750–1800 to 16 in the 1920's. Population grew more rapidly, therefore, in developed than in underdeveloped regions until after 1920 when mortality began to decline in some parts of the underdeveloped world, under the impact of death-control measures introduced from developed regions. After 1930, the rate of natural increase in the underdeveloped world rose above the level in developed regions, exceeding the latter by something like three-fourths in 1930–60.

These trends are manifest in the decline in the share of Europe (including European Russia) in the world's population, from about 25 per cent in 1900–40 to 23.3 in 1950 and under 19 in 1970 compared with 22.7 in 1850.[6] At the same time France's share of Europe's population (including that of European Russia) declined from 9.7 per cent in 1900 to 7.6 in 1940 and 7.5 in 1950. That of the United Kingdom declined from 10.4 in 1900 to 9.0 in 1950; it continued to fall thereafter to 8.8 by 1970 whereas France's share rose slightly, to around 7.7.[7] Meanwhile, according to United Nations estimates, the fraction of the world's population in developed regions declined to 32.6 per cent, after having risen to a peak of 36.7 per cent in 1930 from 25.6 per cent in 1800.

The decline of Europe's hegemony is reflected in decolonization, in the loss of their colonial empires by European powers, especially Great Britain and France, rulers of nearly three-quarters of all territory under foreign control in 1900. France's colonial holdings, somewhat larger in 1925 than in 1900, had formally declined very little by 1950, whereas Great Britain's had declined two-thirds by 1925 and yet more by 1950. By 1972, however, lands over which Britain and France exercised political control had become very small in territorial and population terms, although France did retain considerable influence in her former colonies.[8] Like Britain, France could not hold out against the anti-imperial pressure of political, economic, and ideological change, given the small gross return after World War II in the form of military manpower, military bases, and trade or political advantages. Continuation of "the White Man's burden" yielded too little, certainly not enough any longer to command the financial support of an electorate increasingly concerned with "bread and butter" issues rather than with expensive outlays upon defunct sources of "national glory."

Liquidation of their empires by Britain and France gave rise to successor unions founded upon a degree of common concern or interest, though no longer fortified by that long diplomatic shadow which in the past was cast by the metropole's then relatively great military power.[9] The evolution of the British Commonwealth after World War II roughly paralleled that of the acquisition of independence by former components of the British Empire. Somewhat similar has been the development of the French Community which includes, besides the metropole and four overseas departments, seven small overseas territories, seven independent member states, and special links with six African republics and an arrangement with a seventh. While commonwealth and community arrangements encourage some flow of investment from the metropole into former colonies, diversity of interests greatly limits the degree of unity realizable. The community arrangement does, however, undergird elements of French culture planted in the former colonies even as the British Commonwealth undergirds elements of British culture. But neither can give rise to peace and order within the boundaries of a union as it formerly could within those of what was the empire.[10]

In view of the changes that have taken place, especially in the past twenty-five years, colonial theories have become obsolete, especially of the sort before 1914, with their great emphasis upon the role of colonies and colonial population as a counterbalance to an alleged domestic shortage of manpower. It is no longer practical, even if possible, for low-natality countries to convert less-developed countries into colonies and manpower reservoirs and exploit them for the benefit of the metropole. Immigration can be encouraged, but it needs to be confined to those who are assimilable.

Since the relative strength of a state depends in part upon the comparative size and strength of other powers, a country of the size of France can answer to the description of a great power but not to that of a superpower. It is large and wealthy enough to realize most economies of scale,[11] but it cannot match in military and economic strength a modern superpower, such as the U.S.S.R. and the U.S.A.

Formerly a population of around 45–50 million was considered a necessary condition to a state's achievement of great power status, and military technology was viewed as essentially an adaptation of civilian technology. Today a population of 100 million, perhaps as many as 200 million, is a necessary but not sufficient condition. There is need also for great economic capacity, together with the engagement of a sufficiency of scientists, engineers, and expensive resources in the development of military technology.[12] Even so, excessive emphasis upon numbers can divert attention from other pillars of power, from the importance of effective organization, technology, and the skilled use of equipment; this happened in France in 1939–40.[13] "French statesmen, like most French soldiers, placed their trust in conscription, and numbers" rather than in a "mechanised force of professional soldiers ready for instant action."[14] Moreover, they failed adequately to extend the Maginot Line, essentially a substitute for numbers, so that it could fulfill "the braking function . . . [it] had been designed to perform"; whence this manpower saver was outflanked.[15]

Of major significance in the present context are the inferences one may draw respecting the *military* as distinguished from the *industrial* role of manpower in modern war and defense. Three are plain. A great amount of manpower tends to be wasted when manpower is abundant and economical principles of efficient allocation are neglected, as they were by the Western allies in World War II[16] and later by the Americans in Korea and Viet Nam. Since no European power other than the Soviet Union has all the attributes of a superpower, smaller countries such as France must seek security through a not wholly reliable multinational alliance such as NATO. Attempts to stimulate population growth on military grounds can accomplish little or nothing; they cannot augment numbers more than incrementally, and they may divert resources from uses more productive of military security than would be an incremental increase in numbers. Moreover, while foreign investment of French savings may be used to bolster a security-oriented foreign policy, it can no longer play so large a role as it did in the years preceding World War I when France more than any other European country used selective foreign investment to bolster a foreign policy designed in part to overcome France's alleged shortage of manpower.[17]

II. Growth of the World Economy

The magnitude of France's total product, in comparison with that of Western Germany and that of the United Kingdom, declined between 1870 and 1913, mainly because of the comparative slowness of France's manpower growth and partly because output per capita and per man-hour rose less rapidly in France than in a number of countries (exclusive of the United Kingdom where both indicators rose even less rapidly). During the period 1913–60 France's relative position continued to decline, for similar reasons though less markedly.[18] This decline reflects in part the virtual failure of France's population aged 15–64 to increase between 1913 and 1960 while its labor force trended downward slightly during the same interval. Meanwhile Europe's population aged 15–64 was increasing 30 per cent. By the beginning of 1973, however, the number aged 15–64—27.5 million in 1913 and 27.8 million in 1960—had risen to 32.4 million.[19]

The unprecedentedly high rate of growth of the world's economy has accentuated the reduction in importance of France's relative economic position which still remained notable on the eve of World War I. In 1913, the United Kingdom, Germany, and France together accounted for 93 per cent of Europe's coal production and 72 per cent of its manufacturing, although with France responsible for only 7 per cent of coal production and 13 per cent of manufacturing.[20] World War I brought an end to this preponderance and what J. M. Keynes called an "extraordinary episode in the economic progress of man."[21] It "profoundly upset the balance of the existing economic system, and in several respects changed the basic conditions for long-term development and gave it a new direction"; given 1881–1913 trends one might infer that, but for the war, Europe's 1929 level of production might "have been reached as early as 1921."[22] The temporarily depressive economic impact of this war on France is evident in the fact that 1913 levels of average and total income were not restored until in 1923 after which improvement was rapid.[23]

In part because of its internal demographic situation France was able to contribute to the easing of population pressure in South and East Europe. Europe and its leading states were confronted in 1918 with the need to transform their economies through the introduction of essential technological changes, the reorientation of external trade, and the absorption of the excess manpower of less-developed East and South Europe by more developed North and West Europe, given the reduction of foreign outlets and the resulting great decline of European overseas emigration after 1924.[24] France, with its very low crude rate of natural increase and "boom that continued into the world depression," absorbed about 2.1 million immigrants in the interwar years and increased its foreign-born population to more than three million on the eve of World War II.[25] Even so, the French economy was again set back by World War II, though no more than the economies of a number of countries. While France's average income returned to the 1937 level by 1949, it did not return to the 1929–30 level until after 1950, for it had experienced not only the immediate impact of the war but also actual and impending political changes consequent upon the war.

Conditions improved after the late 1940's.[26] National product increased 4.5 per cent per year in 1949–50—nearly as fast as in 1923–29 when output grew 5.5 per cent yearly—and about 6 per cent annually in the 1960's and early 1970's. France's growth rate has thus risen to a new level, one of the highest in the Western world and much above the 1.3 per cent per year characteristic of the whole period 1913–56—a period embracing two major wars, prolonged depression, and other political-economic problems—and below the rate of any free European country other than Ireland.[27] Aggregate growth was helped after both wars by inflows of immigrants that helped to replace France's losses due to war-connected mortality, birth deficits, and declines in net immigration. The number of persons born abroad and living in France had risen to nearly 3.8 million by 1962 and over 5 million, or 10.1 per cent of the population, by 1968. Of these 5,048,000 about 2,045,000 had been born in Africa, mainly in Algeria and North Africa; about 2,021,000 came from Italy, Spain, Portugal, and Poland.[28] Of France's population growth between 1945 and 1965, about three-tenths were attributable to net immigration, of which half came in between 1962 and 1965. After 1973, owing to a tightening up of immigration regulations and unemployment, net immigration declined sharply.[29]

By 1961 France's relative position within the European economy approximated that in 1938. Her share of Gross Domestic Product in Europe (exclusive of the U.S.S.R. and Eastern Europe) stood at 16.5 per cent in 1961 compared with 16.7 in 1938. Meanwhile, however, her corresponding share of the G.N.P. of the growing industrial world had declined from 7.9 per cent in 1938 to 6.5 per cent in 1961. During the same 23-year period the corresponding shares of the United Kingdom declined and, while Germany's relative position in the European economy improved, her share of G.N.P. in the expanding industrial world fell.[30] Around 1960, however, according to several studies, real consumption per head remained lower in France than in Sweden, the United Kingdom, Denmark, West Germany, and Norway, but by the 1970's its per capita output compared favorably.[31]

The long-run upsurge of output per employee in France dates from the middle 1950's. Whereas average output per employee grew only 2 per cent per year in 1913–29 and 0.3 per cent in 1929–50, it advanced 5.2 per cent per year in 1953–69, thereby raising the annual average for 1929–69 to 2.5 per cent. This last rate compares with 3.1 per cent in Western Germany, 2 per cent in the United States, and 1.6 per cent in the United Kingdom.[32] In 1969 per capita Gross National Product in France, though lower than that in Sweden, Switzerland, and Denmark, exceeded that of Western Germany and that of the United Kingdom. In 1899 and 1913 the French average was exceeded by that of Germany and that of the United Kingdom, but it had definitely moved ahead of the latter by 1960 and of Germany in 1974.[33] A number of factors, among them emphasis upon technical progress, increased competitiveness, efficient use of inputs, and enthusiasm for expansion, contributed to the acceleration of growth in France after 1952 when the prewar level of output was reached.[34] To this list may be added dissipation of values and conditions unfavorable to growth in France in the past, in particular a petty bourgeois or traditional approach to economic activity.[35]

The growth-generating forces operative in France since 1950—forces operative in other countries as well, along with cumulative outcomes of developments set in motion in the nineteenth century—reoriented public and collectivistic attitudes toward population growth in France and elsewhere. Prior to World War I growth of aggregate product was associated most closely with growth of the labor force and the stock of physical assets, in part because output per worker often grew slowly and in part because the contribution of factors other than growth of manpower and physical assets was not clearly identified. Now, however, the contribution of investment in human capital, together with science, technology, and improvements in organization, is well recognized, mainly because of research since the 1930's. About eight-tenths of the growth in per capita product has been found attributable to increases in output per unit of input conventionally defined, and three-fifths or more after allowance is made for current and capital costs. Modernization has, however, been accompanied by increase in a variety of hidden costs internal to economies as well as by growth of the destructiveness of international conflict and preparation for it.[36] The net gain, especially the net gain in welfare or "happiness," has been much less, therefore, than the highly visible gross gain.

Even so, French economic growth since World War II has been outstanding, greater than that of other European economies and continuing so through the early 1970's. This growth reflects, as already suggested, modernization of the economy, together with improved management, advanced technology, investment in physical and human capital, enlarged external trade, and (perhaps) increase in the size of the labor force (to over 21 million) in 1972.[37]

III. France's Demographic Condition, 1936–76

In this section we deal with many aspects of France's post-1936 demographic situation, among them fertility, mortality, immigration, recent changes in fertility and natural increase, and population growth as well as internal migration, population distribution, and age structure.

We are provided with a better and more continuous picture of the demographic state of France than of that of any other country with the possible exception of the United States. Mainly responsible for this have been the theoretical contributions, the empirical research, and the publications of the Institut National D'Études Démographiques, (I.N.E.D.), probably the world's most outstanding national organization of this sort. Established in the ministry of Public Health, under ordinance and decree in 1943–46, and changed, as were corresponding institutes in other ministries, to carry out research essential to advising the ministry and developing policy,[38] the success of the Institute and its able staff in fulfilling its mandate, "d'étudier les problèmes démographiques sous tous leurs aspects," is attributable largely to the able leadership of Professor Alfred Sauvy, its Director until 1962, his successors J. Bourgeois-Pichat and Gérard Calot, and other leading French demographers associated with I.N.E.D. The Institute's journal, *Population*, is a veritable repository of information bearing upon France's contemporary and earlier demographic history, upon pertinent legislation, upon progress in demographic analysis, and changes in the "demographic situation" of France. Particular subjects are examined in greater detail in the Institute's "cahiers de 'travaux et documents'." For my own convenience and that of the reader I have drawn heavily upon Institute publications. *Population* reflects the multifacetedness of Sauvy's view of population problems, his emphasis upon the long-run character of demographic processes and related problems, and perhaps the spirit of his estimate putting France's optimum population at between 50 and 75 million.[39]

Maintenance of population growth has been a major concern of articulated French policy for more than a century, albeit policy not well implemented in law and decree until the late 1930's. This concern was reinforced by France's war losses and the fear that the Net Reproduction Rate (N.R.R.) might descend and remain below 1.0 and eventually result in a decline in France's population—a decline experienced in some departments—and an unfavorable age structure.[40] The major objective has been not so much mere growth of population as growth of the population of productive age. The institute has kept the public informed respecting both objectives and means to their realization.

A distinction needs to be made between the role of net immigration and that of natural increase in producing change in the population of productive age. Only the former source of population growth—net immigration—is immediately responsive to opportunities currently available in France. For while natural increase of population is sensitive to change in economic conditions, natural increase of the productive aged is not; its course echoes the course of natality 16–24 years earlier in response to conditions then obtaining. For this reason, leading French demographers believed,[41] given France's supposed manpower shortage and the unfavorable age structure of her population at the close of World War II, a very large and continuing immigration—at least 100,000 adults per year and in time a total of perhaps five million immigrants —would be required. The use of German manpower—about 700,000 prisoners of war—eased the manpower shortage manifesting itself right after the war ended, only to intensify France's so-called "penury of manpower" upon their departure despite the willingness of some to remain.[42] The need for immigrants, at least in the short-run, was reinforced by the belief that the optimum development of France's mineral resources had been prevented by the smallness of France's population,[43] even as had optimization of the occupational structure.[44] It was desirable, of course, that the immigrants be mainly of younger working age and of preworking age, and in the right proportions, with the latter destined to enter the labor force several or more years later—i.e., persons aged, say, 30–35, and 5–15; then a satisfactory and relatively stable age composition would come into being. It was desirable also that the immigrant be enabled to bring his family, since then he could contribute to natural increase in France as well as be free of the need to remit large amounts of foreign exchange to his country of origin for the support of dependents. Otherwise the volume of immigrant earnings transferred to the native countries of immigrants would intensify balance-of-payments problems and the shortage of foreign exchange.[45]

French public opinion, however, has not generally favored immigration in large volume, though it became somewhat more favorable thereto over time; it has been relatively more favorable among those who endorse higher natality and population growth. An opinion poll in 1944 revealed that in major occupational categories 68 to 89 per cent of those questioned opposed the encouragement of immigration.[46] As late as 1965, more of those polled were opposed than were favorable to increasing the number of aliens, in part because many did not favor any population growth. Some immigrants were preferred to others; those from Belgium, Italy, Spain, Germany (except right after 1945), Poland, Portugal, and Holland were looked upon with more favor than were Yugoslavs, North Africans, and black Africans.[47] Until recently French opinion tended to favor growth of France's population even when it viewed world population growth with disfavor.[48]

Turning now to the contribution of natural increase to France's population growth, we find that from 1800 to 1950 France's population grew less rapidly than that of other European countries,[49] mainly because fertility was lower in France than elsewhere. France's Gross Reproduction Rate, the average number of girls born per mother completing the childbearing period, declined from about 2.0 in 1806–20, to around 1.7 in 1856–80, just over 1.4 in the period 1891–1900, and 1.27 in 1906–10. High mortality, however, often removed the margin above replacement. Thus the Net Reproduction Rate (N.R.R. or net growth per generation) not only failed to reach 1.1 between 1806–10 and 1906–10 but even fell below 1.0 or the population replacement level, during eight of the twenty quinquennia. Subsequently, between 1911–15 and 1941–45, a period marked by war and depression, the N.R.R. remained below 1.0, averaging about 0.84 over this 45-year period. The G.R.R. attained a high of about 1.45 in 1946–49, a level last realized in 1891–95; it slightly exceeded 1.35 in 1951–66, only to descend to 1.29 in 1967. The much higher life expectancy prevalent during the post-1950 period allowed the N.R.R. to average about 1.3, even though the G.R.R. has not been much higher than it was in the nineteenth century. The *true* rate of natural increase ranged between 0.81 and 1.17 per cent per year in 1946–67, averaging close to 1.0 per cent; this rate, while higher than those of many West-European countries, was down to 3.5 per 1,000 in 1973 compared with 10.4 in 1960–64 and 6.1 in 1970–71. Moreover, with fertility barely above replacement by 1974 and ideal family size put at two or three children, natural increase may move close to zero and eventually below.[50]

The crude rate of natural increase became positive after World War II. Among the changes responsible for this increase were the final adoption just before the war of a coherent system of family legislation, together with French experience during the war and reorientation of French values in directions more favorable to early marriage and natality. These changes were reflected mainly in increase in the number of children per family among those who formerly would have had fewer than 2–4 children.[51] Thus at the end of nine years of marriage, families formed in 1943 averaged more children than families formed in 1925 had averaged at the end of fifteen years of marriage.[52] As a result, the crude rate of natural increase, negative in 1936–45, ranged between 0.78 per cent in 1946–50 and 0.83 per cent in 1968–71 and approximated 0.84 per cent in 1972 only to decline to 0.34

per cent in 1975. Over the whole period 1946–72 it averaged about 0.67 per cent per year, a rate higher than the less than 0.5 per cent average for 1816–60 and the less than 0.2 per cent average for 1872–1913.[53]

Since World War II the actual rate of population growth, the result of both natural increase and net immigration, has been much higher than in the preceding fifty years. The annual rate of population growth (in per cent) approximated 0.21 in 1901–06 and 0.18 in 1906–11, and then fell because of war conditions to –0.55 in 1911–21. After the war it rose to 0.73 in 1921–26 and 0.49 in 1926–31, and then declined to –0.02 in 1931–36 and –0.34 in 1935–46. Then the annual rate rose again to about 0.9 per cent in 1946–53, 0.8 in 1953–58, 1.3 in 1958–63, and 0.9 in 1963–71; it fell after 1971, to 0.31 in 1976.[54] There is still some scope for the rate of natural increase to rise as a result of further decrease in mortality, for life expectancy at birth, while higher than formerly, is somewhat lower in France than in several European countries, in part because it is relatively low in many French departments; however, further decline in fertility could offset improvement in mortality.[55]

More detailed studies of fertility indices have illuminated the nature of the post-war upsurge in natality,[56] as well as revealed a decline in fertility between 1964 and 1968 and a subsequent temporary increase.[57] The emergence of this decline prompted inquiry into whether events external to families (e.g., state of the economy, political events, increasing employment of women, events in Algeria and elsewhere outside France) or changes in fundamental attitudes were responsible, or whether a change in fertility patterns (e.g., spacing of births) or distribution of births (e.g., fewer childless and fewer large families)[58] was under way; or whether age at marriage was changing in a significant way[59] (e.g., as a result of changes in occupational structure).[60] The impact of the trade cycle was less pronounced than in the past, in part because its amplitude had declined.[61]

How natality will behave in the future remains a matter of concern. Pressat, on the basis of the fertility of the generation of 1931, has projected the annual number of births to 1,035 thousand by 1980. However, while this projection produced fewer births than took place in 1946–67, it has exceeded reported births since 1967.[62] According to a second projection that abstracts from migration, France's population will increase 16–21 per cent above the 1965 level to between 56.6 and 58.8 million by 1990. It is assumed that live births per woman per generation will fall within a range of 2.65 and 2.2 (which exceeds the lowest recorded average, 2.0, registered by the generation born around 1890). It is also assumed that life expectancy will increase 3.5 years between 1966 and 1990.[63] According to this projection the fraction of the population aged 20–64 years will increase from 54.1 per cent in 1965 to between 54.4 and 56.5 per cent in 1990. According to yet another projection the population 20–64 will number 57.8 per cent in 1976, even in the absence of migration.[64] Should France's population continue to grow in keeping with its 1970 N.R.R., it would number 64.4 million by 2000 and 134.4 million in 2070, given zero migration. Should the N.R.R. move to 1.0 by 1980–85, France's population will level off at 60.7 million in 2045; if it does not move to 1.0 until 2000–05, the population will level off at 67.8 million in 2055. However, with abortion on demand now legal in France and easy access to contraception, the N.R.R. may settle at or below 1.0.[65]

Interdepartmental migration, long characteristic of France's population, augments the rate of population growth in some regions and departments and diminishes it in others. Moreover, mobility has increased—about three-fourths between the mid-nineteenth and the mid-twentieth century.[66] Between 1962 and 1968, for example, thirty-four departments experienced net outmigration. However, only ten actually lost population. Deaths exceeded births in three departments, only one of which was included among the ten losing population; this department, Creuse, also experienced net outmigration.[67] Underlying interdepartmental and urbanward migration are a variety of motives, with desire of the migrant to better his economic condition of overwhelming importance, though with matrimonial and family considerations also of importance in rural areas. Operative also is population pressure in rural areas reflected in the exodus of nearly 4 million members of the agricultural population between 1900 and 1954 in comparison with a natural increase of about 820,000.[68]

The presence of cities of 50,000 and over in departments has been conducive to their growth, presumably on economic grounds; yet, despite the proclaimed attractions of Paris, its drawing power has lagged. Indeed, as Tugault has found, the rate of net immigration rises with size of city up to but not beyond 100,000, with internal and foreign migrants constituting roughly equal parts of the immigrant stream. While France's population was increasing 8.1 per cent in 1962–68, that living in cities of 50,000 and over (exclusive of the Parisian agglomeration) was growing about 13 per cent and elevating the fraction of the population living in these places from about 29 per cent in 1962 to about 31 per cent in 1968. Net inmigration accounted for about 55 per cent of this increase.[69]

Internal migration in France has usually been greatly influenced by attractions which potential migrants envisage—attractions often intensified by locally depressing effects of emigration upon areas with few opportunities; it has also been affected at times by exogenous factors (e.g., war, return of evacuees and influx of immigrants, repatriation of North African colonials). Limitations upon the capacity of regions to accommodate migrants—a capacity in which water shortage can play a part—also helps shape the pattern of internal migration.[70]

Recently, with the decline in the inflow of migrants into France, the growing number of migrant workers entering West Germany has exceeded the number entering France. After the war West Germany absorbed nearly 13 million German-speaking refugees and expellees. Morover, by 1970 the number of foreigners in Germany approximated 3 million. The inflow of migrants into immigrant-receiving countries is likely to fall off as conflict between the native population and immigrants increases.[71] Until now France has been the most important immigrant-receiving and assimilating country in Europe. Table XVIII shows (in thousands) France's total population, together with the number of foreign-born, naturalized and alien.[72]

TABLE XVIII. TOTAL POPULATION AND FOREIGN-BORN (000'S) IN FRANCE, 1851–1968: NATURALIZED AND ALIEN

Year	Total Population	Naturalized	Alien	Foreign-born
1851	35,783	14	381	395(1.10)
1891	38,135	171	1,130	1,301(3.41)
1911	39,192	253	1,160	1,413(3.60)
1921	38,797	254	1,532	1,786(4.60)
1926	40,228	249	2,409	2,658(6.61)
1931	41,228	361	2,715	3,076(7.46)
1936	41,183	517	2,198	2,715(6.59)
1946	38,848	853	1,744	2,597(6.52)
1954	42,781	1,068	1,765	2,833(6.62)
1962	46,456	1,267	2,150	3,417(7.36)
1968	49,756	1,316	2,664	3,980(7.99)

Between January 1, 1967, and January 1, 1977, France's population increased by 3,598,000, of which 2,706,000 consisted of an excess of births over deaths, and 892,000 of excess immigration. Owing to the sharp drop in immigration after 1973, however, net immigration added only 25,000 to France's population in 1975–76 compared with a natural increase of 347,300. Until recently repatriation has accounted for considerable immigration; thus nearly two-fifths of the roughly 3.5 million net immigrants between 1950 and 1972 —nearly 14 per cent of France's population increase—were repatriates. Repatriation is affected by comparative economic and political conditions at home and abroad. Naturalization of foreigners in France was eased in 1976 by simplification of administrative procedures.[73]

The foregoing data on foreign-born underestimate the contribution of immigrants to France's population growth in that they do not reflect the net natural increase of aliens after settling in France. Thus, according to Mauco, the 4.5 million aliens who came to France in 1850–1950 had swelled population returns by nearly 6 million.[74] While the available data make accurate estimates impossible, Robert Nadot estimated that the fraction of all births that can be imputed to immigration rose from 10–13 per cent in 1953 to 15–18 per cent in 1965.[75]

Immigrants have differed from one another as well as from the French in a number of respects. Before World War II they came largely from adjacent countries, Southern Europe, and Eastern Europe. After the war not many came from Eastern Europe, but the number from North Africa greatly increased. In 1938 Italians, Spaniards, Poles, and Belgians made up four-fifths of the roughly 3 million foreigners living in France; the remainder included 125,000 Africans, 85,000 of them North Africans considered French subjects. Thirty years later Italians, Spaniards, Algerians, Poles and Portuguese comprised four-fifths of the 2,621 thousand aliens enumerated in 1968. Some immigrants are allowed permanent status, others temporary. Thus in 1960–71 598 thousand seasonal workers were admitted in comparison with 1,280 permanent workers, together with their 579 thousand family members. Seasonal workers, most of them in agriculture, have been running appreciably over 100,000 a year, with demand for their services originating mainly in agriculture (especially vineyards and the beet sugar industry); they are not accompanied by family members. Aliens are much more geographically concentrated than natives; distribution by ethnic group, however, differs somewhat from that of the French as also do the age structures of the diverse alien populations. Inasmuch as foreign workers are concentrated in the industrial sector (especially building) and in activities not requiring skill, their occupational affiliations do not vary greatly with ethnic origin.[76] Perhaps the most pronounced differences between some ethnic alien groups and others are to be found in the ratings made of their qualities as workers.[77]

Age structure early became a matter of concern to French demographers, embodying as it does the scars of past wars and demographic fluctuations. France's age structure was the first to become differentiated from those of other countries—as a result of the early decline of French fertility. After World War II, with a median age of 35, France's population was the oldest in the world.[78] The fraction of the population 60 and over steadily increased from 10.9 per cent in 1861 to 18 per cent in 1969 and 18.3 per cent in 1975. The general trend is reflected in the percentages of the population in the major age brackets presented in Table XIX. The 1990 figure is from a projection referred to earlier; the percentages in parentheses are those associated with a lower assumed completed fertility average.[79]

TABLE XIX. AGE STRUCTURE IN FRANCE, 1861–2000
(PER CENT)

Year	Under 20	20 to 64	65 and over
1861	35.8	57.5	6.7
1901	34.2	57.3	8.5
1931	30.0	60.0	10.0
1946	29.5	59.4	11.1
1966	34.2	53.6	12.2
1968	38.8	53.6	12.6
1969	33.5	53.8	12.7
1990	32.9(30.3)	54.4(56.5)	12.7(13.2)
2000	32.4(28.8)	54.3(57.1)	13.3(14.1)

These age structures are not those of stable populations. The actual age structure of France's population has several times echoed the impact of major wars upon nuptiality, mortality,[80] and natality (e.g., that of World War I and that of World War II).[81]

The age structures of several hypothetical stable populations are useful to examine. In each case a life expectancy of 70.2 years at birth is assumed, along with zero net migration. With this life expectancy are combined fertility patterns yielding annual rates of population growth of zero (i.e., stationarity), 0.5, and 1.0 per cent.[82] It is of interest to observe that these age structures are more favorable to productivity than those characteristic of France's population in the 1960's in spite of the favorable impact of immigration upon the latter.

Age Group	*0%*	*0.5%*	*1.0%*
0–19	27.4	31.4	35.4
20–64	57.4	56.1	54.3
Over 64	15.1	12.5	10.3

Selective migration accentuates other factors making for "population aging," especially decline in fertility, since it removes relatively more younger persons and thereby, in addition, diminishes natality. Hence some regions have "older" populations than do others. For example, France's agricultural population declined from 8,338 thousand in 1962 to 7,238 in 1968 and was expected to fall to about 6 million by 1975. The *rural* age-structure changes emerging in 1962 to 1968 were expected to continue much as follows.

Age Group	*1962*	*1968*	*1975*
0–19	32.5	31.3	27.3
20.64	54.1	51.9	50.8
65 and over	13.4	17.8	21.9

The outward movement of young people may also be accompanied by an inflow of older pensioners in some cases. The intensity of the movements affecting age structure vary somewhat from rural region to rural region.[83] Some regions, of course, are undergoing changes similar to those experienced by agricultural regions.

Having reviewed French data and indicated the degree to which French natural increase and population growth rose after the last war, together with factors bearing on this upswing, we examine the circumstances affecting French population policy, the attitudes of the population to population growth and immigration, and the bearing of population policy upon demographic behavior. A very detailed study would bring out the degree to which post-1938 policy evolved out of earlier discussions of policy as well as the degree to which it reflects experience during the war; it would also involve careful inquiry into the social forces conducing to decline in French fertility since the early 1970's though at a less rapid rate than in a number of Northern and Western European countries.

IV. Circumstances Affecting Population Policy in France

Policy in General. The content of population policy is conditioned (at least in a democracy) by the state of ideology and public opinion, by concrete problems confronting a polity, and by the philosophy of the special interest groups pressing for a policy. The demographic situation described in the previous section led to two kinds of governmental action: (a) encouragement of net immigration and natality and, by implication, (b) more effective use of France's productive agents, both the nonaugmentable (e.g., land, natural resources) and the augmentable (manpower, human capital, and reproducible assets). It was the first of these two kinds of action that was long and almost exclusively emphasized, in part because of the conservative orientation of many proponents of a positive population policy and of their belief that control of contraceptive practice, together with assistance to relatively large families, would suffice. In time, however, it became apparent that better use of the nation's resources, human and natural, was necessary as well if the means essential to implementing population policy in a more egalitarian world were to be achieved.

In the 1930's advocacy of state policies conducive to population growth, common throughout man's reported history[84] and of long standing in France, became strong enough to win their enactment into law in and after the late 1930's. Previously there had been little formal intervention on the part of the French state. Immigration, together with facilitation of assimilation, had remained largely under private sponsorship as did resort to family allowances and family wage systems. A demographic policy could hardly be described as existing.[85] Three forces underlay the upsurge of pronatalism in the 1930's: (1) the finding[86] that the true *rate* of natural increase was very low or negative in many countries; (2) the persisting belief that population growth was highly desirable on politico-economic as well as military grounds; (3) the growth and spread of an egalitarian, redistributive ideology which found in demographically oriented policies (e.g., the democratization of educational opportunity, family allowances, aid to parents and children) a means whereby inequality in income distribution might be reduced.[87] Presumably the resulting pronatalist measures taken in a number of European countries reinforced the normal post-war upsurge of births and elevated 1950–54 fertility rates much above those of 1935–39—more so in France than elsewhere where fertility had fallen in greater measure after the early 1960's.[88]

Some of the problems confronting France in and after the 1930's were considered to be byproducts of the low level of past French natural increase. One was the set of problems associated with population "aging" examined below. A second was the set of shortages allegedly flowing out of underestimation of future demand because of the absence of significant population growth. "Si l'économie française rest en decà de ses possibilités, c'est en raison de *l'état d'esprit malthusien qui s'est généralise depuis 1929 et qui, par divers canaux, derive du malthusianisme démographique.*" So wrote Alfred Sauvy.[89] This state of affairs, characteristic of France as a whole, was intensified in departments and regions actually experiencing depopulation. Illustrative was investment, especially that in housing,[90] the stock of which had not kept pace with the growth of population, and the shortage of which was unfavorable to fertility and immigration.[91] More attention needed also to be given to education, genetics, and population quality.[92] Military and related considerations were largely neglected, presumably in keeping with the new view that stress should be put upon positive economic and psychological advantages of higher natality.[93]

Population "aging," together with its concomitant—increase in the relative number of unproductive and supposedly parasitic older persons—commanded increasing attention, more in France than elsewhere in Europe. While the economic plight of many of the aged had become a matter of concern and recognized as needing attention,[94] of fundamentally greater concern was the inference that "aging" tended to increase the relative number of unproductive persons and hence to give rise to conflict between inactive or unemployed persons and the active, employed population on whose product the inactive ultimately lived.[95] Because the relative economic status of the aged remained unsatisfactory, corrective action was indicated. In 1946 Daric described a number of required courses of action: increase in output per manhour of employed older workers; increase in the number of hours an older person worked per year; prolonging the working lives of older persons by raising the conventional age of retirement from 60 to 65.[96] Under prevailing and likely demographic and financial conditions, the cost of social security incident on the productive population would rise between 1950 and 1970, Bourgeois-Pichat pointed out in 1950.[97] The cost incident upon the employed fraction of the population would be somewhat lower, of course, given retirment at age 65 instead of 60, and increase in the relative number of persons under 60 who were active[98] members of the labor force. Of the older persons who were unemployed, given 1968 labor-force participation rates, two-thirds would still have been working, given 1901 labor-force participation rates.[99] Even so, the average age of the working population was rising. For example, the median age of the male working population, 22 around 1750 and 27 in 1871 had risen to 34 in 1954 and was expected to rise to 38 by 1975.[100] However, the age of retirement called for under the new social-security plan was put at 60, or 5–10 years below that in many other advanced countries; at this retirement age a male might expect to live in idleness, supported by his fellows, 17 to 18 years, and a female, 18.5 to 20.5 years—one year for each 2 to 2.5 years in the labor force. Not much was done toward reducing the rate at which a worker's productivity was adversely affected by his aging; yet average worker productivity increased 58 per cent in the period 1961–70.

PUBLIC OPINION. The views and desires of the French public have often been at variance with the proposals of those advocating, formulating, or administering French demographic policy. Estimation of the extent of this disparity is not easy, however, insofar as policy has income-redistributive effects which may win public approval on this ground rather than upon the ground that natality, natural increase, and population growth are thereby stimulated. Considerable information is to be had, however, from post-1945 soundings of public opinion bearing upon the state of public information respecting French demography and upon natality, mortality, population growth, and complementary matters.[101] Reference has already been made to the persistence of opposition to the influx of immigrants into France.[102]

Public opinion has not approved the proposals made respecting older persons. Thus, despite the economic advantage associated with deferment of the age of retirement from (say) age 60 to 65, about five-sixths of those polled in 1955 and replying opposed such deferment for a variety of reasons, among them fear that there would be insufficient jobs for young persons. There was little difference of opinion, however, between age groups.[103] In 1946 the number opposing deferment had been roughly the same as that favoring it.[104] In 1965 the relative number opposed corresponded to that polled in 1955.[105] Meanwhile, delay of entry into the labor force has been winning growing approval.[106] Concern has been expressed, therefore, that the inactive members of the population will grow faster than the active[107] and that the resulting increase in the pension burden is being ignored.[108] Already in 1948 Jacques Doublet observed that "it takes four persons of working age to support one old age-pensioner" and that in fifty years there might be only two to provide a pension equal to one-half of the standard wage; retirement before 65 therefore was impossible.[109]

Among the issues on which the French public has been polled are alleged consequences of the legislation of 1920—legislation which virtually prohibited abortion and the diffusion and distribution of contraceptive information and means. This legislation not only undermined the birth control movement in France, but by doing so denied the French public access to improved means of contraception and thereby supposedly made for a high rate of abortion.[110] Various estimates of the annual number of abortions have been put forward. In the I.N.E.D. report it was put in the neighborhood of 400,000, of which not over 250,000 were describable as "provoked."[111] While other estimates usually ranged between a quarter of a million and over a million, only 134,000 (or 19 per 1,000 births) were registered in 1976 under the law of 1975 which allowed deliberate termination of pregnancies if pregnancy might endanger the mental or physical health of the mother-to-be. Undoubtedly, after the repeal in 1967 of laws prohibiting the distribution of contraceptives, together with the establishment of family planning centers in 1971 and further liberalization of access to contraception in 1974, there was less demand for recourse to abortion.[112]

Among the opinions revealed by polling in 1968 the following are noteworthy. (1) The ideal number of children per family, then put at about 2.7, was somewhat lower than ideal sizes reported in 1947 and 1955; even so the 1968 ideal approximated only about 2.5, given due weight to the circumstances of families polled. In 1966 and 1967 about 96 per cent of those polled put the ideal number at between 2 and 4, and only about 2 per cent at 0–1 and 5 or more, respectively. The ideal, allowing for a family's circumstances, ranged from 2.85 among the better paid occupations to 2.39 among laborers; it was slightly in excess of the average reported by respondents, about three-fifths of whom asserted that the coming of children, especially beyond the first, reduced a family's level of living.[113] Over 70 per cent of those responding believed the current actual number of children per household, around 2.4, to be about right, and only about one-sixth of those responding thought the number of births in France was too low. By 1975, however, while preference for 2 or 3 children was common, zero population growth was widely favored. Respondents usually overestimated the actual number of children per French household.[114] Girard and Zucker conclude that "French psychology remains rather Malthusian," that of women somewhat more so than that of men, and that of older more than that of younger persons.[115]

The fraction of those polled who were unfavorable to growth of the French population rose from about 23 per cent in 1947 to 68 per cent in 1967, mainly because of fear of unemployment, though also because of fear of shortage of housing, schools, resources, and elements entering into living standards.[116] Only about one third of those replying found increase in the relative number of older persons to be unfavorable.[117]

French public opinion has become increasingly unfavorable to the anti-individualist and repressive character of French legislation relating to contraception and abortion dating from 1920 and the 1939 *code de Famille*,[118] and designed to make the "normal" family larger.[119] This change in opinion has been associated with the growth of modern liberalism, with the development of the family planning movement, and with the belief that improvement in contraceptive practice will reduce recourse to abortion.[120] In 1965 and 1967 about four out of five of those polled favored the creation of public dispensaries where women could acquire essential contraceptive information and means; in 1956 only about 45 per cent of those responding were of this opinion.[121] Of those with opinions in 1967 about five-ninths favored authorization of abortion on grounds in addition to that of preserving the health of the pregnant woman.[122] By 1967 about two persons out of three were reporting approval of sexual education in the schools as well as defrayment by the state of the costs of contraceptives and advice respecting their use.[123] About three persons in four believe that making contraceptive information and materials available will reduce French natality, half of them appreciably.[124] The attitudes reported reflect the age, religion, education, occupation, and social or professional milieu of respondents.[125]

Antinatalist, or antipopulationist[126] views predominate. Of the 88 per cent expressing opinions, nearly seven-tenths said the birth rate was too high while only one in seven thought it too low; for each twenty-five who favored population growth, there were sixty-five opposed, of whom five preferred a smaller population. Antipopulationist opinions were held by the majority of the members of most major occupational groups; slightly more than half were populationist in opinion in two relatively high occupational categories. Of those with opinions about three-fifths opposed proposals that, should legal barriers to the diffusion of contraceptive information and devices be removed, more generous and widely varied family-aid measures would have to be introduced to countervail removal of these legal barriers. Even so about half of those polled and with an opinion favored increase in family allocations, but on grounds of equity or distributive justice and not on populationist grounds. In 1969, however, family allowances and support for large families were increased by the state, though in lesser measure than many respondents have suggested, and again in 1977.[127]

This response reflects the fact that the addition of children to households had increased the burden of expenditure upon households in significantly greater measure than the family allowance system had augmented the incomes of households. Early studies indicated that the level of living was appreciably reduced when children exceeded two, especially if both spouses worked.[128] Family allowances covered no more than 75 per cent of the needs of children.[129] Disparity between families with no children and those with children tended to increase when wages rose faster than family allowances;[130] it rose significantly between 1950 and 1970.[131] In 1966 it was estimated that the level of living of a family of two or more children was hardly equal to one-half that of a family with no children. In 1974 a survey reported need not only for more financial aid but also for longer leaves of absence for motherhood together with job security.[132]

Put broadly, the condition of families was affected by two distinct sets of circumstances. On the one hand, the wants of the French people (as of most nations) were in excess of their current capacity to satisfy.[133] In theory this absolute condition could be improved provided that output could be increased faster than wants. On the other hand, the *relative* condition of families with children could be improved by diverting to them a larger share of the national income. In 1950 the money value of family allocations and all other advantages conferred upon families, mainly those with two or more children, was estimated at 8.75 per cent of the national income.[134] In 1963 family allowances approximated 4.12 per cent of national income in France, more than elsewhere. Family allowances exclusive of the *salarie unique* increased by 25.2 and 73.3 per cent, respectively, the income of a couple earning $1,500 annually and with three or six children. The corresponding percentages (including tax savings) for a couple earning $2,500 were 18.6 and 47.5. These fiscal advantages did not, in most cases, constitute "a premium for large families." Family burdens were somewhat reduced in 1977 by laws and decrees providing family supplements, facilitating the employment of married women, and helping working mothers.[135]

V. Actual Policy

The function of population policy is to modify the course of population growth and/or the distribution of population in space. Policy is indicated when the actual course of population growth and distribution differs from that sought by individuals in control, or seeking control, of the apparatus of state. French policy, already touched upon, is of two sorts: (a) measures designed to increase population; (b) measures designed to improve the quality and increase the effectiveness of the population.

POPULATION-INCREASING MEASURES. Despite the decades-old expression of concern at the slowness of France's population growth, France had no coherent state populationist policy before 1939, even though the annual number of births in France in the 1960's was less than the annual number recorded in 1740–1884 albeit higher than the number recorded in 1900–1945.[136] The considerations giving rise to the 1939 legislation, among them fear of military weakness,[137] were similar to those inspiring earlier measures.

Immigrants were welcomed as a source of manpower, though hardly as citizens, given the barriers in the way of assimilation and naturalization. With the depression of the 1930's, immigrants became less welcome and this attitude was later intensified by postdefeat xenophobia.[138] Upon liberation in 1945, however, the need for immigration was stressed, and a coherent policy was substituted for the haphazard public and private measures in effect before 1939. Emphasis was placed upon France's current and future manpower needs, though not with emphasis upon demographic considerations. Responsibility for the recruitment and introduction of foreign labor was placed with the *Office National d'Immigration*, under the Minister of Labor and Security, with the result that the availability of employment, together with occupational and other relevant attributes of immigrants, would be taken into account. Little attention was given to the facilitation of assimilation or to the easing of barriers in the way of naturalization. Accordingly, given the fact that potential emigrants preferred many countries to France, economic concessions were made in the hope of attracting immigrants and appropriate agreements were entered into with governments of some countries of emigration.[139]

Although postliberation policy fell far short of that desired by proponents of a strong positive immigration program, it did contribute appreciably to France's population growth. It might have been strengthened, of course, if fewer women had been enrolled in the labor force,[140] and if increase in natality after World War II had not increased the relative number of persons destined to enter the labor force, a contingency noted by a part of the public,[141] perhaps because postwar full-employment ended in 1964.[142] Improvements were made in immigration policy and its administration, however, among them an increase, in and after 1968, in the responsibility of the state for the control of immigrants.[143] With a great increase in unemployment by 1977, however, foreign workers were no longer welcome, and the government sought to facilitate the departure of jobless aliens. Already in 1976 emigration slightly exceeded immigration.

The family allowance system incorporated in the pro-natalist *Code de la Famille* in 1939 was the culmination of family allowance arrangements and related family-aid systems already developed under both public and private auspices, mainly during and after World War I.[144] The major provisions under the Code consisted in a system of family allowances, maternity benefits and differential taxation, the whole contributed to by employers on behalf of themselves and their employees—provisions designed to encourage natality and ease family burdens. The Code underwent changes at the hands of the Vichy regime, among them the *salaire unique*, paid to wives in families with only one regular wage-earner and at least one dependent child of French nationality. The allowances were based upon the average departmental wage, 10 per cent for one child, 20 per cent for the second, and more for higher order children. The allowances were raised in 1941, 1942, and 1945, but graduated to favor families with three or more children and thus reflect a pro-natalist bias.[145] After liberation the total outlay upon the family welfare program, due mainly to allowances and grants, continued to rise, in part to offset increase in prices.[146] While it was early inferred that the family-allowance system had elevated natality and created an atmosphere favorable to children, it was not, Doublet wrote in 1948, "considered capable of solving the French population problem."[147]

With the passage of time, allowances were adjusted upward as basic wages rose. In recent years, for example, upward adjustments were made in 1959, 1962, and 1963 and, after the removal of barriers against the distribution of contraceptives, in 1969, 1970,[148] and as recently as 1977. Whether these increases would countervail increase in the accessibility to contraceptives and abortion remained doubtful. Indeed in its 1966 report to the Minister of Social Affairs the Institute (i.e., I.N.E.D.) had indicated that more than an upward adjustment of allowances was required, particularly given the possibility that a 16 per cent drop in natality would reduce fertility to the replacement level and eventuate in a stationary population of around 58 million.[149] Since then, as noted earlier, fertility has descended below the replacement level.

Among the countervailing steps indicated in the 1966 report, the following may be noted: (1) Given the somewhat antinatalist collective psychology of the French people, it was essential to show that France's natality was not excessive and that children were welcome. (2) It was essential to dissipate fear of unemployment and hence of population growth, to stress the advantages of population growth and density in a modern economy that must remain supple, to call attention to the disadvantages associated with population "aging," and to point to the psychological superiority of a family of (say) three children to a smaller one. (3) Populationist arguments based upon national prestige and defense were to be avoided.[150] Account needed to be taken of the net material costs (e.g., housing, medical, educational, failure of allowances to cover required outlays upon children) as well as of the time and opportunity cost of child care and the *ennui* associated with pregnancy.[151] It was essential to confer advantages upon families with children, but in such ways as to insure confidence in their continuation and avert generation of animosity toward pronatalist advantages.

The Institute identified five areas within which further pronatality action was indicated. (1) Antinatalist provisions of the tax system needed to be corrected and (2) the burden of family service on larger families needed to be reduced.

(3) Freer access to educational opportunity needed to be made available to children in families of four or more children. (4) There was need for more generous housing allowances and adjustment of housing to the concrete needs of relatively large families. (5) There was need for childcare centers and work arrangements that allow mothers to be gainfully employed and at the same time be assured of the care of their children, a need met by governmental action in 1977.[152]

The Institute recognized that its report did not provide an adequate analysis of the totality of forces that bear upon French population growth but are subject to modification. It was noted in particular that the *Code de famille* had been established in troubled times and that the complementary legislation of 1946 had been enacted on the morrow of a defeat (allegedly) caused by "a loss of vitality." There was need, therefore, for a complete study of current actual conditions with an eye to the future.[153]

Population Quality and Effectiveness. Shortage of manpower can be alleviated by increasing output per head. Such increase in turn may be achieved through improving a population's quality, through increasing the stock of complements (including applied science) to manpower, and through optimizing the allocation of manpower among uses. We may discuss these sources under three heads: (i) investment in human capital, mainly education and health; (ii) shifting excess manpower out of agriculture; and (iii) modernizing and economizing the occupational structure in other ways. Distribution of population in space, a corollary to (iii), may, if optimized, increase the effect of changes under (iii). While each of these sources receives attention, especially (i), none has been effectively integrated into French population policy. Other forces, mainly nondemographic, appear to have been dominant. At the same time it remains true that, in keeping with past history, "the tutelary role of the state in the economy is taken for granted," especially in postwar economic planning,[154] and hence remains an important component of the set of socio-economic forces at work.

(i) Investment in human capital, an increasingly important component of a modern national stock of capital, is devoted mainly to education and health, the state of which in France is indicated by her now relatively high life expectancy, 76.5 for females already in 1973.[155] Growth of educational investment reveals the need to democratize education and widen as well as deepen investment in human capital.

At the start of the nineteenth century, higher education was confined to the privileged few and the rudiments of reading and calculation to the relatively small number taught by the village curé or a school master; illiteracy was common.[156] One-hundred and seventy years later over 600,000 civil servants were engaged in the education of twelve million students at a cost amounting to one-sixth of all public expenditure; the school had become the principal agent of economic and social promotion, though supplemented by occupational training expected to reach 1,700,000 per year by 1975.[157]

Growth of the stock of education has been describing a logistic curve not yet at its point of inflexion. Between 1954 and 1970, it is estimated, the stock of education embodied in the labor force increased about 37 per cent.[158] The corresponding prospective increase between 1954 and 1978 was estimated at about 70 per cent. Interdepartmental differences in the intellectual level of the population, as reflected in that of military recruits, suggests that the stock of human as of nonhuman capital is unevenly distributed. This inequality is attributed not only to differences in occupational composition but also to differences within given occupations.[159] Differences in educational attainment reflect not only differences in individual aptitudes which democratization of education cannot overcome but also differences in social milieu (urban vs. nonurban, family background, etc.) which influence aspirations and orientations.[160]

(ii) Lowness of productivity per capita and per hectare slowed down emigration from agriculture and continued the agricultural fraction of France's labor force above that in corresponding highly developed countries; it thus made the growth of France's nonagricultural population and labor force lower than it might have been. Yields per hectare were lower in France than in Western Europe shortly before 1914 and, despite improvement, also in the 1960's. Responsible for the lowness of French productivity were persistence of a peasant outlook,[161] insufficient use of complements to agricultural land and labor, and smallness and parcellation of holdings, conditions encountered in other West-European countries as well.[162] There has, however, been an accelerating trend toward larger enterprises, one facilitated by mechanization and decline in the agricultural labor force—about two-fifths between 1954 and 1968.[163] This trend had been held down in the past by protectionist policies, easily pursuable with France nearly agriculturally self-sufficient—90, 92, and 93 per cent, respectively, before 1914, in the 1950's, and in 1971.[164] In recent years, in part due to continuation of reduction in employment in agriculture and abandonment of less fertile land, together with growth of acreage in meadow and pasture, yield per cultivated hectare has risen; thus in 1971 wheat yield in France, though still 10–20 per cent lower than in other West-European countries, was double what it had been in the 1930's or the 1950's.[165]

Output per agriculturalist has risen under the impact of investment and improvement and expansion of the external market, especially in the European Community, for French agricultural products. As a result France's rural population, 69.5 per cent of the total in 1866 and 48 per cent in 1936, declined to 38.4 per cent in 1962 and 30 per cent in 1970;[166] meanwhile, the agricultural fraction of the labor force, 42.8 per cent in 1906 and 36.5 per cent in 1946, had declined to about 12 per cent by 1973. It is doubtful if this fraction can descend below one-tenth, if so low, given the possibility that France might, if it adequately modernized its agriculture, meet import requirements of Belgium, Britain, and Germany.[167] Thereafter, the agricultural population could supply only its excess natural growth of working age to nonagricultural sectors—a supply that will be small in the near future, given the age structure produced by selective emigration from agricultural areas.[168]

(iii) Inasmuch as the agricultural population will be drained of its surplus membership within the next ten to twenty years, growth of the nonagricultural population and labor force will be limited by natural increase and net immigration from abroad. The effectiveness of this labor force will depend upon the degree to which it is adjusted to the needs imposed by changing technological conditions, that is, to conditions set by the accumulation and flow of information into and within the French economy and polity.

After World War II the industrial structure of France's economy and labor force began to change at a more rapid rate than earlier.[169] Between 1946 and 1968 the fraction of the labor force in primary industry (essentially agriculture) declined from 34 to 17 per cent. Meanwhile, the share of the secondary sector grew from 31 to 39 per cent and the tertiary sector from 35 to 44 per cent.[170] The tertiary component grew faster in 1962–68 than in 1954–62—3.2 per cent per year instead of 2.8 per cent—because manpower was relatively less plentiful in 1954–62.[171] The tertiary sector is expected to increase in relative importance, possibly at the cost of a too slow increase of the secondary sector as has been true in the recent past.[172] It was quite possible, however, that the structure of qualifications of the labor force might not match the required qualifications.[173] These qualifications are conditioned not only by the nature of industries but also by the size of firms increase in which augments the demand for qualified personnel.[174] By 1970 lack of suitable qualifications was becoming a serious cause of continuing unemployment with increase in disparity between the needs of employers and the capacities of unemployed and others in search of employment.[175]

Development of the French economy and labor force in keeping with trends in technology and consumption entailed not only the appropriate education and training of the population but also avoidance of regional imbalance associated with uneven distribution of private and public investment, together with migrants, of which concentration in the Paris region has long been a classic example. While concern with decentralization dates to the 1930's it did not become effectively integrated into French planning until after 1955.[176] The objective of regional policy is a less uneven interregional distribution of economic activity and population, one minimizing both congestion and what may be described as relative regional underpopulation. This objective could be facilitated, it was believed, through appropriate distribution of social and economic overhead capital, in keeping with the spirit of "indicative planning."[177] It was only with the development and implementation of the Fourth and Fifth Plans that a "coherent regional policy" was incorporated "within the framework of the national plan," one dealing with most if not all relevant factors, among them water supply.[178] This type of policy appears to be endorsed by French public opinion, though investment of social overhead capital in lagging regions has not yet proved capable of attracting industry there and growth "entailed profound and traumatic transformations" of French economic life, Cohen reports.[179] Failure contributed to the substitution of a "regional and urban" approach, one contemplating an urban hierarchy or an equilibrium of urban agglomerations, for the policy of "regional development" still dominant in the Fourth Plan.[180] Little attention seems to have been given to the impact of regional redistribution of population and activities upon fertility, presumably because such redistribution tends to raise incomes and allowances and hence to stimulate fertility indirectly. Greater integration of economic and population policy appears to be indicated, especially given descent of fertility below the replacement level.

VI. Conclusion

Our aim has been threefold: (i) to present the French view of France's population prospect, together with various of its implications; (ii) to throw some light on the relation between the movement of France's population and the behavior of the French economy; and (iii) to conjecture respecting the country's demographic future.

(i) There is not much to add under this head. Whatever the factors that have affected natality we may infer that the addition of pronatalist forms of economic assistance to the potential utility expected of children served until recently to increase the benefit-cost ratio of potential parents enough to keep fertility above the replacement level. What the longer run outcome will be, however, is not clear. Pronatalist assistance may prove inadequate to offset the forces augmenting the utility attached to final products that absorb inputs which might otherwise enter into the production of children. Insofar as this is true the fertility-stimulating impact of pronatalist measures will be reduced. At the same time it is always possible that modes of living may change in such ways that the stimulative effects of pronatalist assistance will be sustained or intensified. In general, considerable uncertainty may attach to population projections because even if information regarding functional interrelations is fairly firm, *future* fundamental determinants of fertility may not be correctly anticipated. Segregation of the long-run impact of pronatalist policy in a highly dynamic society is not easy, therefore, since many conditions do not stay put and long-run consequences are not always identical with short-run effects. Moreover, growing social costs may divert resources from the adequate support of pronatalist policy.

(ii) French experience lends little support to the view that slowness of population growth makes for unemployment and slowness of income growth. French population trends have not indirectly made for unemployment; indeed, unemployment has been comparatively low in France until recently.[181] Moreover, the lowness of France's rate of population growth has not notably affected the rate of growth of average income in France.[182] Furthermore, the slowness of French growth between 1913 and (say) 1949 is not imputable to slowness of population growth. Between 1913 and 1956 the annual rate of growth of average output was lower for the whole period —.3 per cent—than in any West European country other than Ireland. This low level, however, was mainly the joint product of two major wars, several lesser wars and the loss of empire, years of economic depression, and the presence in the French economy of conditions unfavorable to release of its full economic potential.

Since the late 1940's, however, French economic conditions have changed. It was even predicted several years ago that within 10–12 years the Gross National Product (GPN) of France would be the largest in Europe and that soon after her GNP per head would be exceeded only by that of the United States and Japan, a prediction not currently in prospect of realization.[183] Such estimates reflect the modernization or transformation of the French economy in the course of the past 25 years—transformation based on heavy investment in mechanization and high technology, together with underinvestment in housing and social infrastructure, and excessive dependence on poorly paid foreign labor. While energy requirements will increase faster than GNP, efforts are underway to meet electricity requirements with nuclear energy and to harness solar energy for domestic and other uses. With progress in other European and some less-developed countries France may encounter increasing competition in the foreign markets to which she has been exporting a rising volume of products and technical know-how in recent years. In general, modernization and transformation of an economy, together with reallocation of the labor force to the most productive sectors, makes possible great upsurges in output (e.g., Japan, Germany) but cannot sustain a rate of increase of 4–5 or more per cent per year in output per worker. Unexploited potential is exhausted and environmental limitations begin to be felt.

(iii) Growth of France's nonagricultural labor force, one of the two bases of her expanding GNP, will depend mainly upon the natural increase of her labor force in the future and increase in labor-force participation, especially on the part of women who now are entering all occupational categories. Given expansion of the demand for French agricultural products and decline of the share of agriculture in Gross Domestic Product to 6 per cent compared with 10.1 per cent in 1962, the agricultural labor force is not likely to continue to decrease as in the recent past. Immigration too is likely to become less important in the future. Wages of immigrant labor will move upward faster than the overall wage level, in part because they have been relatively low and because opportunities are increasing in countries whence most immigrants come. Moreover, there may be increasing resistance on part of lower-paid French labor to the coming of immigrants whose competition presses upon less well-paid elements of the French labor force.[184] Opposition to immigration may, of course, be reduced as the age of retirement is reduced to 60 and the French labor market is deprived of the many man-years of labor in the form of persons over 60 who wish to work and whose labor is essential to the support of the retired population.

It is not surprising that natality and natural increase did not continue at the 1950–70 levels but declined after the early 1970's. For children are a time-intensive labor-oriented product, and consumption generally is becoming more time-oriented. Meanwhile, both the cost of time relative to other inputs into the production of children and consumption by children and in general are rising. The rising relative cost of time, the major ingredient in the production of children and of human capital, is likely therefore to become an increasingly effective constraint on population growth. For neither rising money incomes nor applicable labor-saving investment is likely wholly to countervail the rising relative cost of labor inputs.[185] If so, the age structure of France's population will take on a stable form including a relatively large number of persons aged (say) 60 to 75 but largely diverted from the labor force by Social Security provisions. Retirement of everyone at 60 would increase those of retirement age by about one-fourth and reduce those of working age by about one-eleventh.[186]

While the demographic and economic experience of France over the past three decades does not lend itself nicely to a capsuled description, one may be attempted. Constraints on economic development were relaxed after the war with replacement of "the idyll of a balanced economy," along with emphasis upon "stability and protection," by emphasis upon "growth and modernization" and "the promise and problems of an industrial society."[187] There resulted a marked enlargement of the economy and the realm of opportunity. As a result the aggregate demand for labor and children rose and forces depressive of natality were temporarily cushioned, in part by the family allowance system and related arrangements. Over time, however, societal conditions changed, the opportunity cost of children rose, eventually more rapidly than relevant incomes, and natality became subject to downward pressure. Such pressure is now becoming manifest, along the lines suggested in the preceding paragraph. Its effects on numbers could be somewhat accentuated were immigrants to return to their homelands in greater measure.[188]

NOTES TO CHAPTER XII

[1] Tuchman, *The Guns*, chap. 9.

[2] Tuchman, *The Proud Tower*, pp. xiii–xv.

[3] Adams, *Education*, chaps. 3–4.

[4] On the equivalent of a "recessional" for the United States see Latouche. That the future was only dimly foreseen is evident in the British Liberal Party's *Britain's Industrial Future* (London, 1928), esp. chap. 26.

[5] According to Woytinsky, French military and war-connected civilian deaths numbered about 600,000 in 1939–45 and 1.4 million in 1914–18. *World Population*, pp. 46–47, 143–45. Deaths of military persons in Europe have been put at 9.1 million in 1914–18 and 30 million in 1939–45. United Nations, *World Population Situation in 1970*, p. 9. On war-generated sexual disequilibrium, see Henry, "Schémas de nuptialité," also notes 80 and 81 below. World War I, by destroying so many young adults, destroyed much of France's scientific and related potential, suggests Robert Gilpin in *France in the Age of the Scientific State*, p. 155.

[6] These data are based on Woytinsky, *World Population*, p. 36; On natality and mortality trends see United Nations, *The World Population Situation*, pp. 7, 11–12.

[7] Data for 1900–1950 are based on Woytinsky, *World Population*, pp. 34, 44. France did not recover Alsace-Lorraine, lost to Germany in 1871, until after 1918. Between 1961 and 1971 France's population grew somewhat faster than that of Western Europe. See J. N. Biraben and F. Duhourceau, "La redistribution . . . ;" also on causes and effects of France's population growth, Carré, et al., chap. 2.

[8] Woytinsky, *Commerce and Governments*, chap. 14, esp. p. 664; also pp. 669–83 on costs and returns of colonies. See also Kuznets, *Postwar Economic Growth*, esp. chap. 3. On the population of France's overseas departments and territories, with a population approximating 3 per cent of that of the metropole, see Gérard Calot, *La population*, chap. 13.

[9] On concomitant changes in French society and economy see Hoffmann, *Decline or Renewal?*; also Kuisel, Servan-Schreiber.

[10] See Earle, *Modern France*, chaps. 26–28; de Gramont, *The French*, pp. 172–94; Hazard, "The Need for Empire," in Hazard, *Empire Revisited*, pp. 127ff. On French capital exports see United Nations, *Statistical Yearbook;* also Guillaumont, "L'aide français au développement," pp. 954–71. France has been extending aid to the extent of one per cent of her GNP, two-thirds out of public sources, to the Third World, mainly countries formerly in France's empire. Ambassade de France, *France*, Feb., 1974, pp. 7–8.

[11] Robinson, ed., *The Economic Consequences*, pp. xviii–xix. Robinson puts the minimum required size at about 50 million. Shonfield says that it "may be now well above a national population of 50 million." *Modern Capitalism*, p. 374. See also Carré, et al., *French Economic Growth*, chap. 7.

[12] See my "Population and Potential Power," in Kooy, *Studies*, chap. 5, esp. pp. 128–31, and references; Gilpin, France, pp. viii, 155, 256, chap. 9; G. E. Hendershot. Compare Renouvin, "Démographie et relations internationales," pp. 625–54, and see Steinberg. On the current situation see Alistar Buchan, *The End of the Postwar Era*; Martin, *Arms and Strategy*, esp. chaps. 2, 14.

[13] Hart, *History*, pp. 20–22.

[14] *Ibid.*, p. 32, 705. France had fewer males aged 20–34 than Germany in

1870–71 and less than half as many in 1939. See Earle, p. 317. Recently about 8.5 per cent of those called to military service have been rejected. Vimont and Baubot, "Les causes . . . ," pp. 55–78.

[15] Hart, *History*, p. 241, also 35, 41, 84–88; see also Earle, *Modern France*, chaps. 3, 23–25.

[16] On American, German, and Russian use of military manpower, see Hart, *History*, pp. 562–64, 571.

[17] Woytinsky, *World Commerce*, chap. 5, esp. pp. 194–95, 212, 220; Kindleberger, *Economic Growth*, pp. 198–200.

[18] Kuznets, *Modern Economic Growth, Rate, Structure, and Spread*, pp. 352–53; also Kindleberger, *Economic Growth*, chap. I and pp. 333–38.

[19] I. Svennilson, *Growth*, pp. 238–40; R. Pressat, "Données statistiques," *Population* 28, 1973, p. 597; Maddison, *Economic Growth*, pp. 209–10, 213; Carré, et al., *French Economic Growth*, chap. 2.

[20] Svennilson, p. 16.

[21] *The Economic Consequences*, p. 10. See also Maddison, chap. 1, esp. pp. 28, 30.

[22] Svennilson, pp. 18–19.

[23] *Ibid.*, p. 233. Recovery in the United Kingdom, though less damaged than France, was comparable in slowness to that in France. Kindleberger, p. 339, also 317–20.

[24] Svennilson, pp. 20–32; Delaisi; W. E. Moore, *Economic Demography*. U. S. immigration fell after 1925, especially after 1930. See Woytinsky, *World Population*, pp. 75–83.

[25] Svennilson, pp. 64–65, 95–97; Girard, et al., *Français et immigrés*; G. Mauco, "The Assimilation," pp. 13–22; on assimilation in general see R. Descloitres, passim; also pp. 22–23 on intra-European migration in 1875–1913 and 1918–39. On immigration since 1851 see Calot, *La population*, chaps. 5, 7, pp. 309–311; also Carré, et al., *French Economic Growth*, pp. 39–41, 43, 260, 548.

[26] Svennilson, p. 233; Kuznets, *Postwar Economic Growth*, chap. 3; Kindleberger, chap. 13, pp. 318–20; Devichi; also *World Bank Atlas*. Recovery, of course, depended not only upon increase in manpower but also upon psychological and organizational readjustment.

[27] United Nations, *Some Factors in Economic Growth*, chap. II, p. 3; also OECD reports. Per capita product increased only about 0.5 per cent per year in France in 1800–1850 and about 1.1 per cent in 1850–1913. See *Population*, 26, 1971, p. 140.

[28] Based on United Nations, *Demographic Yearbook*, 1956, 1971. See also "Rétrospectif" numbers of *Annuaire Statistique de la France*, Paris, 1961, 1966. Hereinafter this annual report will be referred to as *A.S.* France's native-born population increased by 23 per cent in 1946–68; others by 52 per cent. See Calot, p. 148.

[29] *A.S.*, 1966, p. 23. On the impact of the trade cycle see Kayser. Of the 12 million increase in 1946–74, net immigration supplied about 20 per cent; repatriates about 10 per cent; and natural increase, about 70 per cent. See Tapinos, 1975; also Biraben, Brahimi, and INED, 1977, 1978.

[30] United Nations, *Growth of World Industry*, Table 27, pp. 256ff., Table 29A, 272ff.

[31] Wilfred Beckerman and Robert Bacon, "International Comparisons of Income Levels," p. 533; also Beckerman, *International Comparisons of Real Incomes*, pp. 36, 42; also Jai-Hoon Yang.

[32] U. S. Bureau of the Census, *Statistical Abstract of the United States: 1972*,

p. 811; also *ibid.*, 1973, p. 813, and Carré, et al., *French Economic Growth*, pp. 554–61.

[33] Yang, Table V; World Bank, *Trends in Developing Countries*, Washington, D. C., 1971, Table 3.5, and World Bank Atlas, 1972, 1977. See also Kuznets, *Economic Growth of Nations*, pp. 11ff., 38ff.

[34] United Nations, *Some Factors in Economic Growth in Europe in the 1950's*, chaps. 2, 5, 6; also Shonfield, chaps. 5, 7–8 and passim. See on France especially Carré, et al., *French Economic Growth*, chaps. 3, 13, and pp. 548–60.

[35] On traits, values, etc., see Earle, *Modern France*, chaps. 4, 19, 21; Hoffmann; Kindleberger, chaps. 5–6; also Sauvy, "Vue générale," pp. 210–11, and *La montée des jeunes* (Paris, 1959). Gilpin describes French society as "a well-balanced mechanism," highly resistant to change. *France*, p. 80; compare B. E. Brown, Hoffman, Kuisel, Servan-Schreiber.

[36] Kuznets, *Economic Growth of Nations*, chap. 2, esp. pp 90–98; also Nordhaus and Tobin. The Jan.–Feb., 1973 number of the *Revue d'économie politique* deals with some of these costs. See also Philippe d'Iribarne.

[37] See Edmund Stillman's articles in *The New York Times*, July 23, 1973, p. 31 and July 24, p. 35; also *Annual Report* of International Monetary Fund, 1973, Washington, D. C., pp. 8–24, and Unsigned, "Rates of Change."

[38] *Population*, I, 1946, pp. 186–91. A minister of population was created in 1945 and in 1946 became the minister "de la Santé publique et de la Population." *Ibid.*, p. 178; Jacques Doublet, "La première legislature." The ministry made too little use of the Institute's research, according to Cicely Watson, "Population Policy in France: Family Allowances and Other Benefits," pp. 48–49.

[39] E.g., see Alfred Sauvy, "Evolution générale de l'économie et de la population en France," pp. 9–26; Sauvy, et al., in Coale, ed., *Economic Factors*, and "Besoins et possibilités de l'immigration française," p. 212. Paul Vincent has suggested that France might support as many as 500 persons per km.^{2}. See "Pression démographique," pp. 9–17. On the Institute see Sauvy, "L'I.N.E.D. a 25 ans," pp. 208–14; also Debré. Sauvy's views are best expounded in his *General Theory of Population*, a translation of his principal French work. On the utility of studying demography of the past and on the inertia of demographic phenomena, see Louis Hery, "Passé, présent et avenir en démographie." See also Calot, *La population*, passim.

[40] See Jean Bourgeois's summary of M. Depoid's projections. *Population*, 1, 1946, pp. 564–66. See also Calot, *La population*, chaps. 3, 4, 11. When the population would begin to decline turned on how fast the N.R.R. fell. See also I.N.E.D., reports, 1975, 1977, 1978.

[41] E.g., see Alfred Sauvy, "Evaluation des besoins de l'immigration française," and "Besoins et possibilités d l'immigration française;" also Paul Vincent, "Vieillissement de la population;" Louis Chevalier, "Bilan d'une immigration;" Daric, "Vieillissement de la population et prolongation de la vie active;" Fernand Boverat. See also Calot, *La population*, pp. 115–17, 125–33, 153–60; Carré, et al., *French Economic Growth*, pp 36–46, 548.

[42] Alain Girard, "Le recours à la main-d'oeuvre allemande." One-fourth of the Germans indicated an inclination to remain in France if feasible. However, 67 per cent of the French public polled in 1946 disapproved a government project to authorize installation of 100,000 Germans; only 16 per cent approved (pp. 580–81). See also Calot, *La population*, pp. 115–17, 239–41.

[43] Albert Michot, "Richesses minîeres et peuplement."

[44] Sauvy, "Plein emploi et plein population." Between 1946 and 1972 average working life declined about one-fifth. Net immigration meanwhile accounted

for about 27 per cent of growth in population and 62 per cent of labor force growth. Calot, *La population*, pp. 115–17, 179–82, 187.

[45] J. Bourgeois-Pichat, "Migrations et balance des comptes."

[46] Mauco, "The Assimilation," pp. 21–22.

[47] A. Girard found that in 1949 only 54 percent of the population favored further population growth, and that those opposed to further population growth did not favor immigration. "Le problème démographique et l'évolution du sentiment public." While French attitudes have not become much more favorable except among the better educated, the role of immigration in the French economy has become better understood and French attitudes, at least, more tolerant. See Girard, "Attitudes des Français;" also Catherine Gokalp, "L'immigration étrangère en France en 1972." On African immigrants see Hélène Bergues, "L'immigration." In 1964 there were less than 100,000 blacks in European France. See Robert Delerm. On decline in French ideal family size and ease of immigration into France see Girard, Roussel, and Bastide, "Natalité . . . ," *Population*, 1976, and Brahimi, "Chronique. . ."

[48] J. Ho, "L'opinion mondiale."

[49] E.g., see Kuznets, *Economic Growth of Nations*, pp. 11–14, and *Modern Economic Growth*, pp. 42–44; also Nathan Keyfitz and Wilhelm Flieger, *World Population*, pp. 30–38, 312–39. Calot, *La population*, pp. 111–12; I.N.E.D., reports for 1975, 1977, and 1978.

[50] See Birabin, 1975, 1976; Girard and Bastide, 1975. On the G.R.R. and N.R.R. see *A. S.*, Retrospectif, 1961, 1966, and United Nations, *Demographic Yearbook*; also *Population Index*, April, 1976, pp. 367–71, and 1977, pp. 375–76. The evolution of France's population under the impact of changes affecting age-specific fertility and mortality has been traced by J. Bourgeois-Pichat. See "Evolution de la population française depuis le XVIII^{e} siècle," also his "Où en est la natalité française?" dealing with the rise of natality after 1939. See also Keyfitz and Flieger, *World Population*; Patrick Festy, "Evolution de la fécondité;" Calot, *La population*, pp. 13–29, chaps. 3–4; and on post-1973 decline in natality, I.N.E.D., 1978 report, pp. 289–302, 305–13.

[51] E.g., see Camp., chaps. 2, 5; Dudley Kirk's essay in Earle, ed., *Modern France*, pp. 322–23; J. Bourgeois-Pichat, "Où en est la natalité française?" Louis Henry, "Mise au point sur la natalité française," pp. 197–226, esp. pp. 206–07, 210, 219–21; Henry and Roland Pressat, "Evolution de la France," esp. pp. 19–21; also notes 56–59 below. Comparative data relating to France and other advanced countries are presented in United Nations, *Recent Trends*.

[52] Henry, "Mise au point;" pp. 204–05, 210. Henry and Pressat underestimated the population of 1971. "Evolution de la population," p. 29.

[53] Data are mainly from *A.S.*, Rétrospectif, 1966, p. 75, *A.S.*, 1969, p. 44, United Nations, *Demographic Yearbook*, and Unsigned, "La situation demographique de la France en 1972," *Population*, 28, 1973, pp. 1039–57. See also Calot, *La population*, chaps. 3, 11; I.N.E.D., reports, 1975, 1978; Biraben, 1975, 1976; Bourgeois-Pichat, "Baisse. . .," 1976; Girard, "Dimension ideale . . .," 1976.

[54] Rates are based on United Nations, *Demographic Yearbook*. See also I.N.E.D., seventh report, 1978, pp. 281–82.

[55] See J. Vallin, "Table de mortalité de la population française (1960–1964)," and C. Blayo, "Mortalité." Male life expectancy at birth rose from 61.87 years in 1946–49 to 67.51 in 1960–64; female, from 67.43 to 74.42. Vallin, "Table," pp. 393. See also J. Vallin, "La mortalité," and note 155 below. On natality and variability in it see Biraben, 1975, 1976, Leridon, et al., in Coale ed., *Economic Factors*, and Yves Tugault, *Fécondité*, 1975.

[56] Gérard Calot and Louis Henry, "Nuptialité," and Gérard Calot and Solange Hemery, "L'évolution;" Roland Pressat, "Les naissances." On the impact of divorce as such upon natality see Louis Roussel, "Les divorces," and on other determinants of natality, T. P. Schultz, et al., in Coale, ed., *Economic Factors.*

[57] Chantal Blayo, "La baisse;" also R. Pressat, "Données statistiques," 1967. See also Gérard Calot and Solange Hemery, "La fécondité;" Gérard Calot, et al., "L'évolution récente." Louis Roussel, "L'attitude;" Pressat, "Interprétation;" Camp, chaps. 2, 5; Calot, *La population*, chap. 3.

[58] E.g., see Blayo, "La baisse;" Roland Pressat, "Les aleas" and "Interprétation des variations;" Calot and Hémery; Hervé Le Bras, "Géographie." On the impact of spacing patterns see Louis Henry, "Étude statistique;" also Roussel, "L'attitude;" Fontaine, "Population, emploi." See also on increase in average family size Carré, et al., *French Economic Growth*, pp. 36–39.

[59] Chantal Blayo, "Fécondité;" also Camp on changes over the period 1800–1962. On nuptiality, see also *A.S.*, Rétrospectif, 1966, p. 76.

[60] Louis Roussel, "La nupitalité." On the decline of fertility in isolated regions formerly marked by high fertility see Hervé Le Bras, "Géographie." See also Camp, chaps. 2–5.

[61] H. Leridon, *Natalité*, and Leridon's comments in *Population*, 28, 1973, pp. 288–89. See also Kayser.

[62] Pressat, "Les naissances."

[63] Patrick Festy, "Projections." See also note 69 below for a forecast of 68 million by the year 2000.

[64] Françoise Léridon, "Prévisions."

[65] U. S. Bureau of the Census, *The Two-Child Family*, pp. 6, 16. According to the United Nations projections France's population will grow from 50.7 million in 1970 to 62 million in 2000, but her rank in size will fall from 14th to 20th. On frequency of abortion see I.N.E.D., seventh report, 1978, pp. 295–97.

[66] Yves Tugault, "La mobilité géographique;" Camp, pp. 105–06, 183. But cf. A. Beltramone. On mobility and its determinants see Henri Bastide and Alain Girard, "Mobilité." On increase in migration between industrial sectors see Carré, et al., *French Economic Growth*, chap. 6.

[67] P. Festy, "Le récensement," pp. 385–88, 390–91. On the behavior of internal migration in France see Yves Tugault, *La mesure de la mobilité*; Daniel Courgeau, "Migrants et migrations," esp. p. 99–100, 114–17. On changes in interdepartmental fertility patterns and the reduction of differentials, see Le Bras, "Géographie."

[68] Alain Girard, et al., "Mobilité;" also A. Sauvy, "Evolution de la population agricole." On effects of the pressure of agricultural population upon resources at the local level see Georges Grigoroff.

[69] Computed from Festy, "Le récensement," p. 389. In 1962–68 the Parisian agglomeration grew by 8.1 per cent to 8,197 million. On the growth of this region see Jean Bastié and Marcel Brichler, "Délimitation." See also Calot, *La population*, chap. 10; Yves Tugault, "Migrations internes en France de 1954 à 1962," esp. pp. 475–76; Louis Henry, "Villes nouvelles;" also Girard, et al., "Mobilité" and works cited in note 70 following. On the Paris region and regional inequality see Niles M. Hansen. On economic considerations see Prud'homme who estimates that by 2000 17 percent of France's then 68,000,000 will be rural compared with 38.4 per cent in 1962. See also Ambassade, May, 1976; International Federation for Housing and Planning, *Bulletin*, 1973, No. 3; also note 166 below.

[70] R. P. Mols, S.J., "L'accroissement;" see also René Colas, "Le problème

de l'eau," pp. 38–39, 42, 45–54; and on the changing impact of Paris, Louis Chevalier, "Préambule démographique;" also R. Lachene. On the Paris region see also Hansen, chap. 2 and passim; and "New Towns in France," Ambassade, *France*, Jan., 1974, pp. 4–6. In the French Sixth Plan, 1971–75, provision is made for nine new towns.

[71] E.g., see Gokalp, 1973; John Nielsen, "A Dilemma;" but compare I. M. Hume. For data see *Population* 25, 1970, pp. 129–30; 27, 1972, pp. 308–12; 28, 1973, pp. 925–34. On Intra-European migration in the 19th and 20th centuries, see Descloitres, Section I. Between 1969 and 1973, according to *Population*, (Nov.–Dec., 1974, pp. 1139), foreigners in Western Germany increased from 30 per 1,000 inhabitants to 64 per 1,000.

[72] For data for 1921–68 see Girard, "Attitudes;" earlier data are based on census returns. Aliens reported for 1954 include 212 thousand Algerian Mussulmans, those for 1962, 335 thousand. For descriptions of the composition, characteristics, and socio-economic situation of the immigrants see Catherine Gokalp, 1973 and 1972; Georges Tapinos, "L'immigration étrangère en France en 1967;" and "L'immigration étrangère en France depuis 1966 et la nouvelle politique de l'immigration;" Odile Rabut, "Les étrangers en France." On defects in immigration data see Yves Tugault, "L'immigration étrangère en France;" Daniel Courgeau, "Les départs." See also Calot, *La population*, chaps. 5, 7, also pp. 148–50 for slightly different nationality data than are given above; also Carré, et al., *French Economic Growth*, p. 548. Natural increase accounted for about 0.7 of the increase in 1969–75. I.N.E.D., Report, 1976, p. 17.

[73] E.g., see Mauco, pp. 14–20; A. Juret; J. Stoetzel and Alain Girard, "Problèmes;" Descloitres; Charbit; Calot, *La population*, pp. 309–11; I.N.E.D., seventh report, pp. 281–82, 289, 299–302.

[74] Mauco, p. 13.

[75] Nadot, esp. p. 495; also Solange Hémery and Odile Rabut. See also Roland Pressat, "Les aléas," pp. 613–15, 627, and Louis Henry and Roland Pressat, "Evolution de la population;" also Leon Tabah and Alberto Caldo; Calot, *La population*, pp. 257–62; I.N.E.D., seventh report, pp. 301–02.

[76] In the department of the journal *Population* labeled "Chronique" one or two reports on immigration and immigrants appear every year. I have drawn on these and on *A.S.*; also Girard, "Attitudes." See also Calot, *La population*, chaps. 5, 7.

[77] E.g., see Mauco, pp. 19–22; Girard, "Attitudes," pp. 834–43, 857. Many foreign workers remain in France for many years, often to be naturalised; length of stay varies with nationality, family status, etc. See Georges Gallais-Hammons, et al.

[78] United Nations, *The Aging*, pp. 9–18.

[79] See note 63 above and accompanying text. See Calot, *La population*, p. 258 for estimates as of 2000 given zero immigration and constant or falling fertility (in parentheses); also Biraben, 1976, Parant.

[80] E.g., see Louis Henry, "Perturbations;" also Hervé Le Bras, 1974, and Biraben, 1976.

[81] Paul Vincent estimates the losses due to mortality and birth deficit at 2.85 million in 1914–18 and 1.3 million in 1935–45 and that due to emigration in 1939–45 at 320,000. "Conséquences;" also his "Guerre et population," and Jean Bourgeois's summary of other estimates of war losses in *Population*, 1, 1946, pp. 560–64; also Kirk, in Earle, ed., pp. 318–21 on the impact of World War II. See also note 5 above; Calot, *La population*, pp. 22–27, 34–38, 55–59; Biraben, 1976, on impact of past events on current age structure.

[82] See United Nations, *The Concept*, pp. 194–95.

[83] Thérèse Locoh, "La population." On the evolution of the rural population see Calot, *La population*, p. 176–77, 209–13, 219–27, 234–36; Paillat, 1976; I.N.E.D., 7th report, 292–95; Fontaine.

[84] E.g., see David Glass's very informative *Population Policies*, passim; Calot, *La population*, chap. 12; H. T. Eldridge, *Population Policies*; United Nations, *Economic Measures in Favour of the Family*, and *Measures, Policies and Programmes Affecting Fertility.* Even decentralization policy, in part an outgrowth of war-generated étatism, dates to the 1930's. See Hansen, chap. 3. See also United Nations, *The Déterminants. . .*, 2d ed., chap. 17.

[85] See Cicely Watson's excellent papers in *Population Studies*; also Jacques Doublet, "La première législature."

[86] Demographic expectations regnant in the 1930's were reflected in projections prepared in 1944 under League of Nations auspices; these greatly underestimated the subsequent course of population growth, particularly in France and other European countries with very low fertility in the 1930's. See also A. Sauvy, "Les prévisions faites en 1944."

[87] On populationist measures adopted in various European countries see Glass; and on outcomes of redistributive philosophy, United Nations, *Incomes in Postwar Europe.*

[88] E.g., see United Nations, *Recent Trends in Fertility*; Jean-Noël Birabin, et al., "La situation démographique," esp. pp. 440–56; Unsigned, "La situation démographique . . . en 1972," *Population* 28, 1973, pp. 1041–43; Biraben, 1976; Girard, Roussel, and Bastide; Bourgeois-Pichat, "Baisse. . .," 1976.

[89] Alfred Sauvy, "Vue générale et mise au point," esp. 210–11; also Sauvy, *Histoire économique*, I, p. 431, and "Les charges." See also Stassart on difficulties likely to be associated with slow population growth.

[90] Alfred Sauvy, "Vue générale et mise," pp. 213–14, and "Logement et population." On forces affecting the quality of housing (e.g., individual vs. collective housing) see Yves Tugault, "Deux études." The very poor were particularly short of housing. Georges Malignac, "Le logement des faibles." See also Lantoine and Paillat. On interrelation of age of a community's inhabitants and age of town itself see Le Bras and Jean-Claude Chesnais, and Jean-Claude Chesnais and Nizard; also Paillat, 1976.

[91] Robert Colin; Louis Henry, "Structure." Cf. Jacques Magaud. On post-1948 lodgings aid see Calot, *La population*, pp. 318–21; I.N.E.D., "Un exemple." See also on investment, Carré, et al., *French Economic Growth*, chaps. 4–5.

[92] E.g., see I.N.E.D., "Un exemple;" Carré, et al., *French Economic Growth*, pp. 62–75, 214–16, 479–80; Jean Sutter, "Normes qualitatives;" Sutter and Léon Tabah, "Les notions;" Jean Sutter, "Fréquence de l'endogamie;" Albert Jacquard and Robert Nadot, "Mariages consanguins;" also Jacquard, "Evolution des populations;" Daniel Courgeau, "Mutations, migrations." On education attainment see Calot, *La population*, chap. 9; on educational limitations see Boudon.

[93] I.N.E.D., "Sur la régulation des naissances en France," a report to the Minister of Social Affairs by the Institute, *Population*, 21, 1966, pp. 645–90. It was recommended, however, that preference in respect of exemption from military service be accorded young fathers of three or more children. *Ibid.*, pp. 687–88. In 1942 Marshal Pétain gave as a primary cause of France's defeat "too few children." See Cicely Watson, "Birth Control and Abortion," p. 266n. For more reasonable causes see Hart, chap. 7 and pp. 706–08.

[94] Jean Daric, "Vieillissement de la population, besoins et niveau de vie;"

Jacques Doublet, "Sécurité social et démographie," esp. 263–64, 270–77; Thérèse Locoh, "L'entrée en maison de retraite." Unemployed persons aged 60 and over are now guaranteed an income equal to 70 per cent of a reference wage. See *International Labour Review*, 108, Nov. 1973, pp. 439–40. On age, labor force participation, and unemployment, see Calot, *La population*, pp. 178, 183–87, 200–04, 273–81.

[95] E.g., see Paul Paillat, "Les moyens d'existence des personnes âgés," esp. pp. 9–11, 23; also Hirsch. *The French Sixth Plan*, 1971–75 included provisions intended by 1975, when persons over 65 would number 7,130,000, to cover adequately the needs of the elderly. See also Locoh and Paillat, and Paillat and Wibaux.

[96] Jean Daric, "Vieillissement démographique et prolongation de la vie active;" Paillat, "Les moyens d'existence," esp. pp. 23–24; also Henry, "Pyramids," on age structure and vertical mobility. Labor force participation declined about 17 per cent in 1946–68, mainly because of decline among those under 25 and over 54. Carré, et al., *French Economic Growth*, pp. 46–60.

[97] J. Bourgeois-Pichat, "La structure de la population et la sécurité sociale," pp. 435–92, and A. Sauvy's comment, *Population*, 5, 1950, p. 415. See also on seniority, etc., Henry, "Pyramides."

[98] Paillat, "Les moyens d'existence," pp. 11–24.

[99] See J. Bourgeois-Pichat's report on the Strasbourg conference on aging, *Population* 27, 1972, pp. 209–40, esp. pp. 226–28; also pp. 220–24 on conflict between interests of workers and those of idle older persons. See also Paillat, "Les moyens d'existence," pp. 12–17.

[100] Jean Fourastié, "Le personnel des enterprises," esp. pp. 298–300.

[101] Most of the soundings were taken under the direction of Alain Girard and his associates. These appear in *Population* 23, 1968, pp. 225–64; 22, 1967, pp. 401–54; 21, 1966, pp. 9–50; 17, 1962, pp. 645–82; 15, 1960, pp. 245–88; 11, 1956, pp. 105–41, 481–506; 7, 1952, pp. 617–36; 5, 1950, pp. 333–52, 4, 1948, pp. 11–46; 2, 1947, pp. 205–20.

[102] See Watson, "Recent Developments," pp. 12–20, 37–38. In 1966 Bastide and Girard concluded that despite a shortage of manpower in certain sectors of the French economy, immigration of foreign workers was generally opposed. See "Les tendencies," pp. 37–38, 50; also *Population*, 5, 1950, pp. 348–50; also Bernard.

[103] *Population*, 11, 1956, pp. 138–39.

[104] *Ibid.*, p. 140.

[105] *Population*, 21, 1966, pp. 41–43.

[106] *Population*, 11, 1956, pp. 132–37, 21, 1966, pp. 39–41, 50. See also Jean Fourastié's estimates of the degree to which the labor force would be reduced by prolongation of schooling. "La croissance des classes jeunes;" also Claude Vimont, "Conditions de vie et d'emploi des jeunnes travailleurs."

[107] Roland Pressat, "Évolution future de l'emploi." The tendency of the wages of workers to decline after age 60 may weaken the desire of older workers (as compared with professional people) to remain active. On earnings profiles see G. Roustang; also Henry, "Pyramids." See also the special Feb., 1970, number of *Population*, devoted to the active and employed population.

[108] *Population*, 23, 1968, p. 264.

[109] Jacques Doublet, "Family Allowances," pp. 225, 229–30.

[110] Watson, "Birth Control and Abortion" esp. pp. 261–66, 273–80; also *Population*, 1, 1946, pp. 178–79. See also the Report of the Institute to the Minister of Social Affairs, in response to his inquiry of November 5, 1965, dated April 26, 1966, and entitled "Sur la régulation des naissances en France," *Popu-*

lation, 21, 1966, pp. 645–90, esp. pp. 647–51; also I.N.E.D., seventh report, pp. 295–97.

[111] *Ibid.*, p. 659; see also Camp, chap. 4; Unsigned, "La situation démographique de la France en 1972," *Population* 28, 1973, pp. 1039–64.

[112] *Population*, 22, 1967, pp. 439–42, 33, 1978, pp. 295–97. On the state of contraceptive practice in France see Henri Fabre and Jean Sutter, "Opinion médicale;" Watson, "Birth Control," esp. pp. 264–65, 280, 282; Ambassade, *France*, May, 1976, pp. 3–5; also footnote 110 above.

[113] Alain Girard and Elizabeth Zucker, pp. 227–32.

[114] *Ibid.*, pp. 232–35. On 1975 opinion see Girard, Roussel, and Bastide; also Girard, "Dimension ideale. . .," pp. 1124–27.

[115] Girard and Zucker, p. 264. See also *Population*, 11, 1956, p. 141, also pp. 111–12 on degree to which family tradition conditions the ideal of the current family. On the influence of regional and religious conditions, together with their correlates, see Louis Roussel, "L'attitude," p. 132.

[116] Girard and Zucker, pp. 236–40, also 243–47 on growing fear of unemployment; also *Population*, 21, 1966, pp. 35–37, 17, 1962, pp. 665–73, 15, 1960, pp. 261–63, 286. A rise in unemployment, as in recent years, tends to intensify opposition to immigration.

[117] Girard and Zucker, pp. 241–43.

[118] Watson, "Birth Control," pp. 266–70, 283.

[119] E.g., Paul Vincent, "La famille normale," esp. 266–68.

[120] Girard and Zucker, pp. 225, 250; also *Population*, 22, 1967, pp. 401, 437–39, 21, 1966, pp. 23–25.

[121] *Population*, 21, 1966, pp. 24–25; Girard and Zucker, p. 249.

[122] Girard and Zucker, pp. 251–52.

[123] *Ibid.*, p. 249.

[124] *Ibid.*, pp. 249–51; *Population* 22, 1967, pp. 437–39.

[125] *Ibid.*, pp. 446–51

[126] Girard and Zucker, pp. 256–64.

[127] *Ibid.*, pp. 251–56; Girard, Roussel, and Bastide, 1976; Ambassade, *France*, May, 1978, pp. 3–5.

[128] Albert Michot, "Les conditions;" Alain Girard, "Les conditions;" Bernard Quillon, "Les conditions."

[129] Georges Malignac, "Minimum vital." See also Alfred Sauvy and Georges Malinac, "Du salaire minimal."

[130] Yves Martin. "Niveau de vie . . ."

[131] Paul Paillat, "Influence du nombre d'enfants sur le niveau de vie de la famille—évolution en France de 1950 à 1970" and "Influence du nombre d'infants sur le niveau de vie de la famille—Évolution de 1950 à 1961;" also Paillat, "Les differences de la vie au sein de la classe ouvrière."

[132] I.N.E.D., "Sur la regulation," p. 680; Girard, Roussel, and Bastide.

[133] E.g., see Alfred Sauvy, "Un essai d'économie integral" and (with Francoise Léridon), "Du calcul des revenus."

[134] Emmanual Rain, "La compensation," esp., p. 421. Cf. Jean Bénard.

[135] United Nations, *Measures, Policies, and Programs*, p. 21, and *Incomes in Postwar Europe*, chap. 6, pp. 34–35; Ambassade, May, 1978, pp. 3–5.

[136] E.g., see Doublet, "Family Allowances;" Watson, "Population Policy in France," esp. pp. 263–69. See Calot, *La population*, p. 283, also pp. 286–96 on history of anti-birth-control legislation, and pp. 296–306 on material assistance to families and children.

[137] On this point see Watson, "Population Policy," p. 270.

[138] Watson, "Recent Developments," pp. 3–14.

[139] *Ibid.*, pp. 15–38. On legislation see *Population*, 1, 1946, pp. 171–78, 180–86. On controls established under post-war legislation see Calot, *La population*, pp. 309–16.

[140] Only about two-thirds of the French labor force were male between 1901 and 1968. On post-1968 labor force participation by sex see Alfred Nizard.

[141] *Population*, 15, 1962, pp. 665–68.

[142] Jean Fourastié, "La croissance," pp. 15–18; Philippe Vrain, "L' évolution," esp. pp. 444, 454. On the multiplicity of sources of unemployment see Claude Fontaine, "Population et chomage."

[143] E.g., see Georges Tapinos, 'L'immigration étrangère en France en 1967," and "L'immigration étrangère en France depuis 1966 et la nouvelle politique de l'immigration;" also Catherine Gokalp, 1972 and 1973. See also on legislation, *Population*, 23, 1968, pp. 1166–69, 25, 1970, pp. 1137–40.

[144] Watson, "Population Policy," pp. 263–69; Doublet, "Family allowances," pp. 219–22. On post-war changes in philosophy underlying demographic legislation see Calot, *La population*, chap. 12.

[145] Watson, "Population Policy," pp. 271–86.

[146] Watson, "Population Policy," pp. 46–73.

[147] Doublet, "Family Allowances," p. 239.

[148] See *Population*, 14, 1959, p. 800; 18, 1963, p. 211; 19, 1964, p. 612; 23, 1968, pp. 1169–70; 24, 1969, pp. 1047–49; 20, 1971, pp. 222–24. Changes in the allowance system are reported in the *Journal officiel*, extracts from which are reprinted in *Population*. On the allowances and benefits in effect in 1974 see Calot, *La population*, pp. 297–305, 314–26; also Ambassade, *France*, May, 1978.

[149] I.N.E.D., "Sur la régulation," pp. 671–73.

[150] *Ibid.*, pp. 677–79.

[151] *Ibid.*, p. 680. On the inputs of time required in households see Alain Girard, "Le budget-temps," and Girard and Henri Bastide, "Le budget-temps de la femme mariée à la campagne;" also Jean Stoetzel, "Une étude de budget-temps."

[152] I.N.E.D., "Sur la régulation," pp. 679–89. On factors affecting the decisions of professional women to remain active see Nicole Dubrulle and Geneviève Gontier. On the 1977 measures see Ambassade, *France*, May, 1978, pp. 3–5.

[153] I.N.E.D., "Sur la régulation," pp. 689–90.

[154] Shonfield, p. 109. See also John and Anne-Marie Hackett; the French government's *Cinquième Plan de developpement économique et social (1965–1970)*, 2 vols., Paris, n.d.; and Ambassade de France, *France, The French Sixth Plan, 1971–1975*, New York, 1973.

[155] See note 55 and text above. Life expectancy in 1970 was 68.6 for males and 76.1 for females; the correspondingly highest levels (in Sweden) were 71.85 and 76.54. Overall life expectancy approximated 76.5 years in 1973. On the interrelation of health and productivity see Patrick Guillaumont, "Santé et production." See also A. Sauvy, "Mortalité, masculine;" Jean Daric, "Mortalité, profession, et situation sociale."

[156] About 85 per cent of the male working population was illiterate in 1750, 60 per cent in 1830, 20 in 1901, and 5 in 1954. See Jean Fourastié, "Le personnel des enterprises." In 1972 the number of persons of working age but unfit to work was put at 100,000 and contrasted with an estimate of two million for the United States. Fontaine, "Population et chômage," p. 123. See note 157 following.

[157] See Antoine Prost; Alain Girard and Henri Bastide, "La stratification."

See also *Cinquième Plan* (cited above in note 154) I, pp. 34–41, 80–81. In the *French Sixth Plan* stress is placed on employment, on occupational training for the young, workers over 45, women, immigrants, and the physically handicapped, and on labor mobility.

[158] Michel Debeauvais and Pierre Maes, esp. pp. 421, 432–33. See also Calot, *La population*, pp. 164–67, 171–72.

[159] Maurice de Montmollin. See on non-human capital, Claude Martin, "Fortune privée."

[160] See Claude Martin, "Fortune privée;" Boudon; Alain Girard and Henri Bastide, "Orientation," esp. pp. 226–33; also Jean Dumard and Geneviève Gontier.

[161] "Le socle de la société française demeure toujours paysan," wrote Andre Siegfried in 1930 in his *Tableau des partis en France*, p. 40. See also E. M. Earle, ed., *Modern France*, passim, esp. J. E. Sawyers' essay, pp. 306ff. Today, however, the peasant is in process of becoming an anachronism. See Henri Mendras, *La fin des paysans*; Hackett, pp. 86–87, 211; Camp. On the transformation of French agriculture during the first half of the century see Kindleberger, chap. 10. See also Alfred Sauvy, "Le exode rural;" B. E. Brown, pp. 385–86.

[162] United Nations, *Economic Survey of Europe, 1960*, chap. 3; Svennilson, pp. 91–101. In 1921 85 per cent of French holdings included less than 25 acres and as late as 1955 (when the average size of some 2.3 million farms approximated 37 acres) 60 per cent of these farms included less than 6 acres, 70 per cent were too small or too poor for tractors, and there were 33 parcels of land per farm. By 1970 the number of farms had declined to about 1.6 million. The average size of a farm, 47 acres in 1967, had risen to 55 by 1972, but with over 70 per cent below 50 acres. See K. E. Ogren. Ambassade de France, *France*, November, 1973, p. 4. See also J. F. Dewhurst, pp. 197–201, 486–508, 513, 1083, 1089; Hackett, pp. 272–73, 283–85; Svennilson, pp. 250–57; Royal Institute of International Affairs, *World Agriculture*, p. 138; H. P. Muth, *French Agriculture*, pp. 21–22. In 1958, according to Grigoroff, 30 hectares (i.e., 73 acres) were required to keep a man, wife, and one helper occupied. "La dimension" p. 646. Ten hectares (25 acres) has been described as the minimum viable farm-size in northwestern Europe. United Nations, *Economic Survey of Europe 1960*, chap. 3, p. 5. On the impact of smallness of holding see André Fel.

[163] F. Houillier, 1971, 1972, 1973. In 1892 75 per cent of French farm enterprises included less than 10 hectares and only 2.5 per cent over 50 hectares; the former occupied 21 per cent of the agricultural area, the latter, about 30 per cent. In 1929 63 per cent of the enterprises numbered 10 or less hectares, and 3.9 per cent, over 50; in 1967, 47 and 6.5 per cent, respectively. By 1967 the fraction of the area in farms of over 50 hectares had risen to 32 per cent while that in farms of 10 or less had fallen to 11 per cent. See Louis Chevalier, "La productivité," IFO-Institüt für Wirtschaftsforschung, *Agricultural Marketing Systems in the EEC-Member Countries*, Munich, 1972, Vol. 2, Table F2-1. The number of farm tractors rose from 37,000 in 1945 to 760,000 in 1960 and 1.35 million in 1972. Ambassade de France, *France*, November, 1973; Ogren, p. 6. Agricultural production increased 3.3 per cent per year in 1945–65 compared with 1.2 per cent in 1920–39. Carré, et al., pp. 28–29, 511, 517.

[164] F. Houillier, 1972, p. 954; Dewhurst, pp. 197–201; Muth, pp. 15–16; Michel Augé-Laribé, *La politique agricole de la France de 1880 à 1940*; Kindleberger, pp. 196, 236–39, 280. Protectionism has long dominated Euro-

pean agriculture. See United Nations, *Economic Survey of Europe, 1960*, chap. 3, pp. 26–28.

[165] Based on F.A.O. data. See United Nations, *Some Factors*, chap. 3, esp. part 5, and *Economic Survey of Europe 1960*, chap. 3; Svennilson, pp. 89–93.

[166] Only 45 per cent of this rural population were agricultural; in 1866, 74 percent. In 1985, if France's population numbers 57.6 million, about 20 per cent will be rural. United Nations, *Statistical Yearbook 1972*, New York, 1973, pp. 84–85. See also note 69 above.

[167] Louis Chevalier, "La productivité." The author depends largely on the work of Pierre Coutin. On the recent and prospective state of French agriculture see J. M. Hallquist, "France to be Leading Producer in Europe by 1985," *Foreign Agriculture*, 11 (52), Dec. 24, 1974, pp. 4ff. This paper is based on Hudson Institute, *L'envoi de la France*, Paris, 1973.

[168] See Thérèse Locoh, "La population des ménages;" Paillat, "Le vieillissement. . . ."

[169] On comparative earlier trends see S. Kuznets, *Modern Economic Growth of Nations*, chap. 6, esp. pp. 249–58. On changes in France, in and before this century and since 1946 see Carré, et al., *French Economic Growth.*

[170] Alfred Nizard, "La population. . ."

[171] Laurence Foucher; Philippe Vrain; Marie-Francoise Mouriaux.

[172] Claude Vimont, "Comparison," esp. p. 18.

[173] Jean Fourastié, "Image;" Claude Vimont, et al., "Le prévision," pp. 483, 522.

[174] Claude Vimont and Laurence Foucher, "Les effets." On the increase in industrial concentration since the war see A. P. Weber; also J. Ho, "Une étude," 1965.

[175] Vrain, "L'évolution des demandes."

[176] Hansen, chaps. 3–4; Hackett, chap. 4 and passim. See also Moriaux. Substitution of regionalization for departmentalization of administration, proposed as early as 1890, has accelerated since the war. Ambassade de France, *France*, October, 1973, pp. 5–6.

[177] On this type of planning see Shonfield, passim; S. S. Cohen, *Modern Capitalist Planning*, pp. 7–20, 62, and "Recent Developments. . .;" John Sheahan; Vera Lutz; Ambassade de France, *France and Economic Planning*, New York, 1963. See especially Cohen's critical account.

[178] Hansen, chap. 9; U. S. Senate Committee on Agriculture and Forestry, *Rural Development: The Industrialized Free-Enterprise Nations*, Washington, D.C., March 23, 1973, pp. 29–32; also *Cinquième plan de developpement économique et social (1966–1970)*, I, chap. 5.

[179] Hansen, chap. 7, also chap. 3; Cohen, "Recent developments," esp. pp. 8–9, 23–26.

[180] Hansen, chap. 10; also chap. 11 on Hansen's evaluative comments. *The French Sixth Plan 1971–1975* includes provisions for regional planning and development. Since 1973 greater emphasis has been put upon the development of medium-sized towns.

[181] United Nations, *Statistical Yearbook*; also Moriaux.

[182] E.g., see E. H. Phelps Brown, pp. 323–24, 344; Kuznets, *Modern Economic Growth*, pp. 64–65, 352–53, and *Economic Growth of Nations*, pp. 11–14; also Kindleberger, chap. 4. For a different interpretation see Jean-Claude Chesnais and A. Sauvy; also A. Sauvy, "Les charges économiques."

[183] The Hudson Institute, *L'envoi de la France.* This study was prepared for the French government by the Institute. In 1975 Gross National Product in France was exceeded by that in six European countries, though it had grown

more rapidly than that in most European countries in 1960–75. *World Bank Atlas*, 1977, p. 6. See also Carré, et al.

[184] See Nielsen; Hume, 1973 and in Coale, ed., *Economic Factors.*

[185] Supplements to the March–April 1973 and March–April 1974 numbers of the *Journal of Political Economy* deal with choice and the purely economic aspects of fertility and the production of human capital. On the decline of French fertility since 1964 see I.N.E.D., *Rapport*, 1976, pp. 25–29, 40–41, 43–47, also the 1977 and 1978 reports.

[186] Cf. I.N.E.D., *Rapport*, 1976, p. 19. In a sense the economic forces affecting fertility resemble those affecting the performing arts in which there is little room for productivity increases whereas in manufacturing the productivity of labor constantly increases; the rising alternative use value of the mother's as of the actor's time militates against fertility as against acting. See W. J. Baumol and W. G. Bowen, p. 164.

[187] E.g., see Kuisel, also Hoffman, Servan-Schreiber.

[188] While depressed economic conditions tend to stimulate outmigration of foreign workers, France may be less prone to this tendency. See *U. S. News & World Report*, Aug. 19, 1974, pp. 49–52; also David Cohen.

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The following abbreviations have been employed for three statistical sources to which reference has been frequent: *Annuaire Statistique de la statistique générale de la France (A.S.); Proceedings of the International Congress for Studies on Population,* Rome, 1932 *(Proceedings); Résultats statistiques du recensement général de la population effectué le 8 mars 1931 (Census of 1931).*

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